

NOVEMBER 1959

# BUTANE-PROPANE *News*

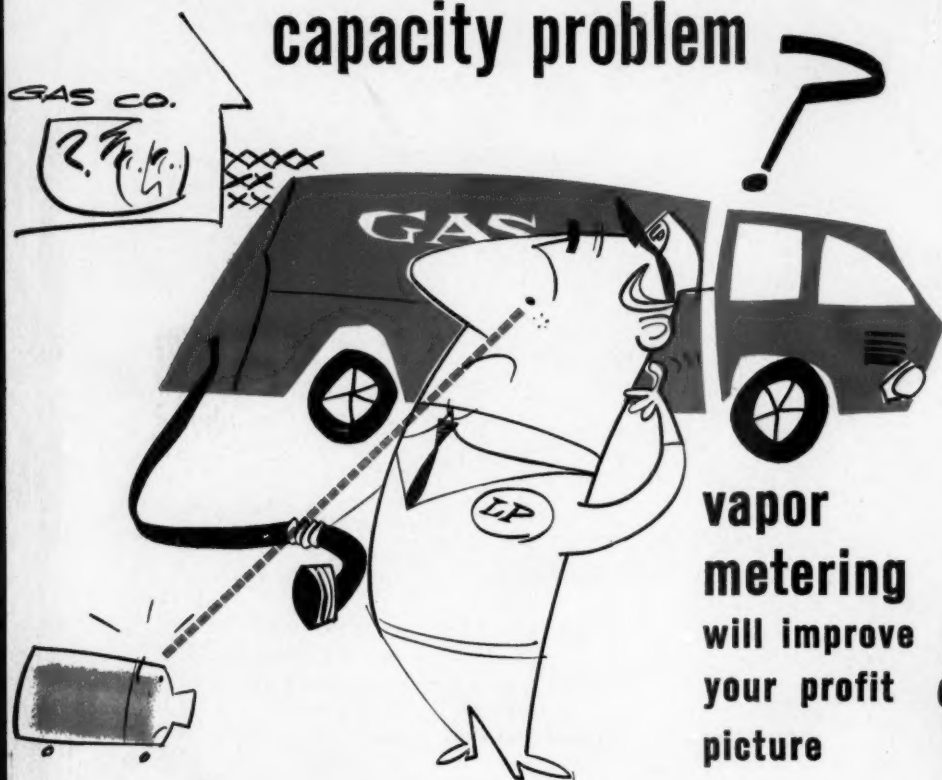
A CHILTON PUBLICATION

HEADQUARTERS FOR L.P. GAS INFORMATION SINCE 1931

The dealer said Yes! . 37

\$58,000 annual saving  
will double . . . . . 99

## does your operation have a storage capacity problem



vapor  
metering  
will improve  
your profit  
picture



Does your operation have a storage capacity problem? Vapor metering will increase your storage capacity considerably by allowing you to make full use of customer's tanks. This is a big advantage especially when extra truck time is available or when you can get a price break on fuel.

Many operators have made the economy and convenience of vapor meters the hub around which to build and increase their businesses—profitably. Get full facts now. Write for "tell-all" bulletin ADV-41, Rockwell Manufacturing Company, Pittsburgh 8, Pa.

### Safe — Economical — Convenient

The Rockwell vapor meter is made with a strong, impact-resistant outer housing of pressure cast aluminum alloy. It's rust-proof, corrosion-resistant. Mounting brackets are supplied to simplify installation.



LP-GAS VAPOR METERS

another fine product by

## ROCKWELL



# When you up-end your cylinders, what do you see?

**Rust and corrosion?** Not if your cylinders are Hackney double-bottom head cylinders! The smooth, rounded contour of the *second full bottom head* leaves no place for rust and corrosion to form.

**Crushed foot rings?** Not if your cylinders are Hackney double-bottom head cylinders! The integral, fluted foot ring and double-bottom head construction, welded all around, adds the strength needed to withstand rough handling and accidental dropping.

**Worn-out bottoms?** Not if your cylinders are Hackney double-bottom head cylinders! These strong cylinders can end bottom failure for many years beyond the lifetime of conventional cylinders! Fewer cylinder replacements and more money for profits.

**A deep, rusted crevice?** Not if your cylinders are Hackney double-bottom head cylinders! There is no sharp angle where foot ring and bottom are joined. Cleaning and painting are easy to do. Rust can't get a foothold.

**Mud, snow and ice?** Not if your cylinders are Hackney double-bottom head cylinders! The broad, shallow, fully rounded bottom offers virtually no chance for accumulations of compacted materials.

**Check your cylinder bottoms now.** Consider what Hackney *double-bottom* cylinders can save you in maintenance time, repainting dollars and rebuilding costs. Write for quantity prices and delivery dates.



### Hackney LP-Gas cylinder—Model RC-100A-DB

Cross section shows how Hackney patented double-bottom head construction is stronger, doubles life of cylinder, makes cleaning and painting easier, and reduces replacement and maintenance costs.

**Hackney**  
INCORPORATED

## Pressed Steel Tank Company

Manufacturer of Hackney Products

1487 South 66th Street, Milwaukee 14, Wisconsin

Branch offices in principal cities

LP-GAS CONTAINERS FROM ONE POUND TO 30,000 GALLONS



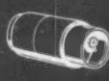
cylinders



systems



fuel tanks for  
trucks and tractors



lift truck tanks



tank trucks



transports



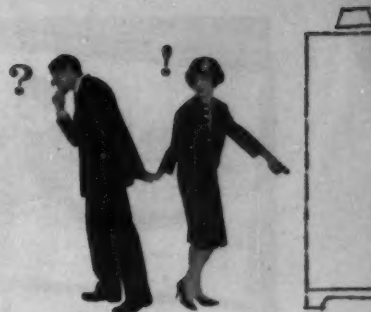
bulk storage tanks



ONLY the  
**ROBERTSHAW UNITROL 400R**  
 features  
**DEMONSTRATION**  
 to help you sell water heaters!



as seen in  
 Saturday Evening Post,  
 Sunset, and  
 Good Housekeeping  
 Magazines



*appearance catches their eye...*



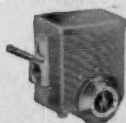
*modern design arouses interest*



**...and demonstration sells them!** Specify the amazing new Robertshaw Unitrol 400R with the exclusive slip-top cover and the flip-top lid so that your sales people can *demonstrate* your water heater! (In addition, Robertshaw Unitrols with built-in pressure regulators increase gas burner ratings and improve ignition performance.)

UNITROL 200R  
 (with built-in pressure regulators)

UNITROL 110R



UNITROL 400

UNITROL 200

UNITROL 110



**Robertshaw**  
 CONTROLS COMPANY



GRAYSON CONTROLS DIVISION  
 LONG BEACH, CALIFORNIA

*There is a dependable Robertshaw Unitrol for every water heater you manufacture*

**Modern kitchen:** When Philgas is the cooking fuel, you can cook faster and better. It's the cleanest, most efficient fuel. It's the only fuel that doesn't leave a sooty residue on your food or your kitchen. It's the only fuel that doesn't leave a sooty residue on your kitchen.

**Modern laundry:** When Philgas is the laundry fuel, you can wash faster and better. It's the cleanest, most efficient fuel. It's the only fuel that doesn't leave a sooty residue on your clothes or your laundry.

**Modern home heating:** When Philgas is the home heating fuel, you can heat faster and better. It's the cleanest, most efficient fuel. It's the only fuel that doesn't leave a sooty residue on your home or your heating system.

**Modern power farming:** When Philgas is the power farming fuel, you can farm faster and better. It's the cleanest, most efficient fuel. It's the only fuel that doesn't leave a sooty residue on your farm or your power equipment.

**Modern irrigation:** When Philgas is the irrigation fuel, you can irrigate faster and better. It's the cleanest, most efficient fuel. It's the only fuel that doesn't leave a sooty residue on your irrigation system or your crops.

**Modern crop dryer:** When Philgas is the crop dryer fuel, you can dry faster and better. It's the cleanest, most efficient fuel. It's the only fuel that doesn't leave a sooty residue on your crops or your dryer.

**Modern on-the-farm storage:** When Philgas is the on-the-farm storage fuel, you can store faster and better. It's the cleanest, most efficient fuel. It's the only fuel that doesn't leave a sooty residue on your storage facilities or your farm.

**Philgas**  
THE ALL-PURPOSE FUEL

For more information, or the address of your nearest distributor, write  
**PHILLIPS PETROLEUM COMPANY**  
Bartlesville, Oklahoma

## PHILGAS DISTRIBUTORS benefit from Philgas Advertising

Almost three million readers will see Philgas advertising this Spring in Farm & Ranch and Capper's Farmer! Full color, eye-catching, hard-selling! These ads are typical of the powerful and continuing advertising push that helps create new customers for Philgas distributors. Sell Philgas and get the full benefit of Philgas consumer advertising.

And Philgas distributors also enjoy these additional advantages:

1. The Philgas Business Control Workshop helps you run your business successfully.
2. The Philgas Cooperative Advertising plan includes newspapers, radio, TV, signs and other approved forms of advertising.
3. Sales Promotion Aids available. Streamers, point-of-sale, window signs, mailing pieces.

\*Philgas is the Phillips Petroleum Company trademark for its high quality LP-Gas (propane, butane).

4. Planned Delivery System helps you make the best use of your transportation equipment and manpower.

5. Even Payment Plan helps both the consumer and the distributor.

6. Technical Assistance. Expert help on your individual operational problems is a very important reason for doing business with Phillips.

7. Adequate Supplies. Phillips Petroleum Company is the largest producer-marketer in the field. Modern storage facilities, pipelines and tank car fleet assure you of dependable supplies at all times.



## PHILLIPS PETROLEUM COMPANY SALES DEPARTMENT, Bartlesville, Oklahoma

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DENVER, COLO.—1375 Kearney St.  
DES MOINES, IOWA.—6th Floor, Hubbell Bldg.

HOUSTON, TEX.—6910 Fannin Street  
INDIANAPOLIS, IND.—3839 Meadows Drive  
KANSAS CITY, MO.—201 E. Armour Blvd.  
MINNEAPOLIS, MINN.—215 South 11th St.  
NEW YORK, N.Y.—80 Broadway  
OMAHA, NEB.—3212 Dodge St.

RALEIGH, N. C.—401 Oberlin Road  
SALT LAKE CITY, UTAH—68 South Main  
ST. LOUIS, MO.—4251 Lindell Blvd.  
TAMPA, FLA.—3737 Neptune St.  
TULSA, OKLA.—1708 Ulrica Square  
WICHITA, KAN.—501 KFH Building

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Volume 21 - Number 11

# BPN

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# BIGGER PAYLOAD DELIVERY UNITS

## THE Nor-Tex FOUR STANDARD PAYLOAD SPECIAL CUSTOM DE LUXE

Available In Twin or Single Barrel Models



2500 WG Units Weigh Under 23,000 lbs. Loaded!

**You'll Haul  
Extra Gallons  
Each Trip!**

**You'll Deliver  
Extra Gallons  
Each Trip!**

**You'll Work Fewer  
Hours... Drive  
Less Miles!**

**You'll Earn  
More Money The  
Nor-Tex Way!**

Nor-Tex presents the newest development in sleek, LIGHT-WEIGHT, stream-lined twin or single barrel LPG Delivery Units and again Nor-Tex is FIRST with ALUMINUM SKIRTING and CABINETS and engineering designs which have reduced over-all weight. 3000 WG units and over are also available for use on cab over or cab forward trucks and are still within the 18,000-lb. axle limit.

Nor-Tex Custom units haul "extra" gallons each trip! You deliver "extra" gallons faster with Nor-Tex custom designed high flow plumbing. You take fewer hours and travel less miles to deliver a gallon of gas. For day in, day out efficiency, durability, payload, fast loading, high rated delivery, perfect balance and appearance Nor-Tex delivery equipment can't be beat!

WRITE, WIRE  
OR PHONE  
FOR PRICES



National Sales Agents for

*Ideal In States Imposing Ton Mile Tax*

### Manufacturers of Fine LPG Equipment

Whatever your needs in LPG equipment there is a safe, profitable, factory tailored Nor-Tex unit ready for you. We are truck distributors and we manufacture LPG Truck and Transport Tanks, all types of LPG Tractor and Motor Fuel Tanks, Portable LPG Filling Stations, Trailer Tanks, LPG Storage and Domestic Tanks, Farm Carts and Anhydrous Ammonia Tanks, all built by men with years of Butane-Propane bulk plant experience. Let Nor-Tex help you boost profit and slash delivery costs with High Flow piping... faster loading and unloading units.

# NORTH TEXAS

Extra Savings!  
We Are Truck Distributors!

**Nor-Tex**  
**LOW COST**  
**LPG**  
**Financing**  
A PLAN TO MEET EVERY NEED

May We  
Help You?

Interested attention, experienced assistance and helpful suggestions are yours for the asking.



Aluminum  
Skirting  
and  
Cabinets

Hitch  
YOUR PROFIT  
to a  
STAR

You can now haul  
**MORE GAS and LESS STEEL**  
Than ever before!

### CUSTOM BUILT

with every desired feature in an above ground tank

- ★ Nor-Tex construction exceeds all safety requirements.
- ★ Thoroughly buffed and cleaned for finest appearance.
- ★ The Nor-Tex STAR is completely fitted and ready for use.
- ★ Bottom outlets are standard on all above ground tanks.
- ★ Immediate delivery on one Nor-Tex STAR or a truckload.

Internal Relief  
Valve on all  
"STAR" Systems

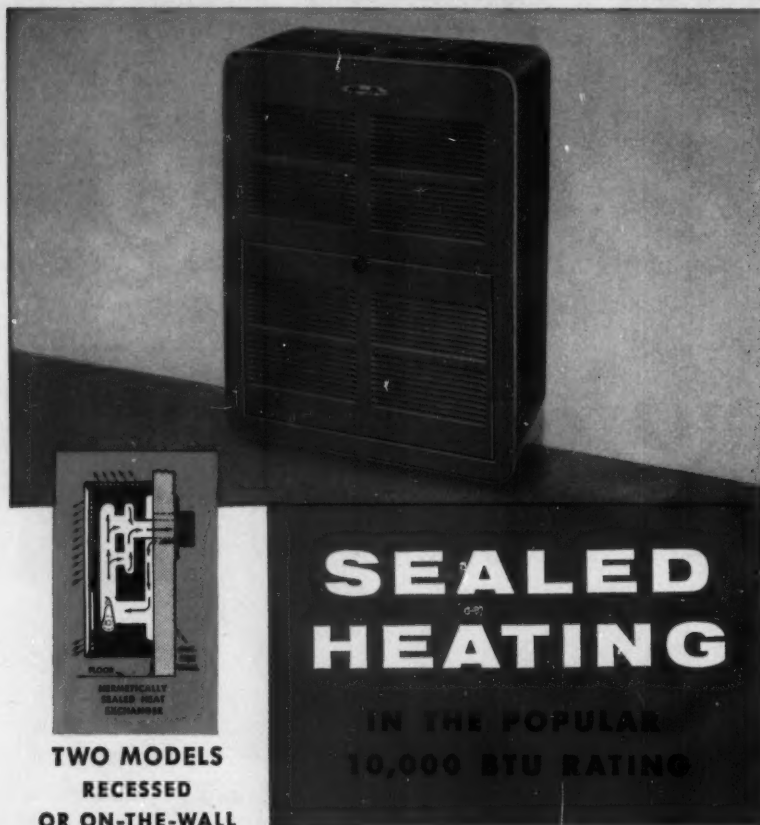
- ★ Custom Made Hood
- ★ Rego Multi-Valve
- ★ Rego Regulators



# TANK CO.

P. O. BOX 1219  
DENTON, TEXAS  
CENTRAL 5416

**BRILLIANT FIRE is years ahead!**



**TWO MODELS  
RECESSED  
OR ON-THE-WALL**

**EXCLUSIVE WITH**

**Vent-O-Magic**

Consumer-tested Vent-O-Magic sealed heating is now available in the 10,000 BTU rating . . . the only sealed heating unit available in this popular capacity. And featuring the exclusive Magic Vent that literally breathes through the wall for safe, quiet, comfortable heating.

Added flexibility . . . these new Vent-O-Magics are available in an "On-The-Wall" model in beautiful Coppertone and Cafe' baked enamel . . . or in a recessed model, featuring white baked enamel and chrome. Suitable for installation in walls up to 24 inches thick.

Fully A.G.A. tested and approved and completely automatic. One-piece cast-iron burner and precision-machined, slotted ports assure economical, balanced combustion on natural, manufactured, mixed or LP gas.

Ask for Bulletin No. 7050

**"America's Finest Since 1846"**

for natural • manufactured • mixed • LP-gases

**THE OHIO FOUNDRY & MANUFACTURING CO.**  
STEUBENVILLE, OHIO



**A CHILTON PUBLICATION**

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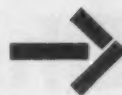
**BUTANE-PROPANE News**



ANNOUNCING  
**Chevrolet trucks**  
**for 1960**  
**with total newness!**

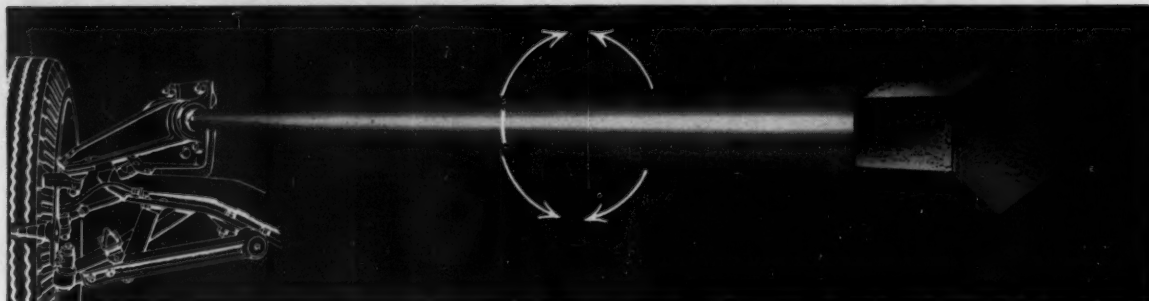


*Here comes the biggest improvement in trucking in decades . . . a revolutionary improvement that can make any truck route in America a far smoother road to bigger profits for you. Turn the page for the hottest news for truckers since coffee was invented!*



# new torsion-spring ride!

THE SMOOTHEST THING THAT EVER CAME BETWEEN A ROAD AND A LOAD!



**Independent front suspension with tough torsion bar springs... for trucks!** Years in the making, this totally new suspension system protects everything from bumps and jolts... provides a new kind of performance that lengthens truck life, protects cargoes, reduces driver fatigue and cuts maintenance expense to new lows. Independently suspended, each front wheel steps cleanly over bumps. And the friction-free torsion bars work to absorb each jolt or jar; they flex freely, even on the smallest bumps, yet have the capacity to absorb severe shocks. The result is a truck ride so wonderfully smooth that it must be experienced to be believed! And it's now standard in all classes of 1960 Chevrolet trucks!



**Three tailored-to-the-truck rear suspensions** complement the revolutionary torsion bar independent front suspension. In Series 10 and 20 models, frictionless high-capacity coil springs ease the rear axle over bumps. In Series 30\* and 40 models, a new two-stage leaf spring provides tailored springing action... and in Series 50, 60, 70 and 80 models, all-new variable-rate rear suspension gives spring resistance that adjusts automatically to cushion any size load.

\*Optional at extra cost.



## Chevrolet trucks for '60

# new style, new models!

## NEWLY ENGINEERED FOR EXTRA SAVINGS THROUGH EXTRA STRENGTH!

Rolling in on revolutionary torsion springs, these 1960 Chevies are smooth as silk yet tough as nails . . . totally new in scores of profit-boosting ways! In the light-duty class, for example, big new Series 40 chassis-cabs and stakes add to your earning power with G.V.W.'s up to 14,000 lbs. And virtually every model offers a new lower-to-the-ground build (without sacrificing road clearance) which improves truck stability and makes cab entry easier. In the big-truck class, too, Chevy for '60 sports big-profit G.V.W.'s — up to 19,500 lbs. in middleweights and 36,000 lbs. in heavyweights — with stronger components including new frames with more massive bracing and brawnier side rails, new bigger brakes, and the latest in low-cost V8 or 6-cylinder power.



**New Comfort-King Cabs!** There's more comfort than ever before, with 5 inches more shoulder room, 6 inches more hip room and more leg room and head room, too! A new wider seat, combining S-wire, coil and flat spring elements, offers a new high in easy riding. And Chevy's new double-walled cowl and new double-panel roof construction provide extra ruggedness and long life.

**New custom cabs!** Available in all 1960 cab models, they include distinctive exterior door pillar and rear belt line moldings . . . handsome chrome grille (light-duty models) . . . new Super Cushion Seat with foam seat cushion and backrest . . . sunshade, armrest, cigar lighter and control knob trim.

**New compact L.C.F. models!** Twenty-six new Chevrolet Low Cab Forward models with short cab design allow for maximum length trailers and extra cargo space. Short wheel-base and turning radius give exceptional maneuverability. Bumper-to-back-of-cab dimension is as short as 90 inches. G.V.W.'s go up to 25,000 lbs. and new cab design makes entering easier. And in series 50 and 60 models you can choose 6-cylinder or V8 power.

**New tougher built tandems!** They're the best built Chevy tandems yet with Hendrickson RT320 rear suspension, two 16,000-lb. Eaton rear axles and 7,000-lb. front suspension (9,000-lb. front suspension optional, extra cost).

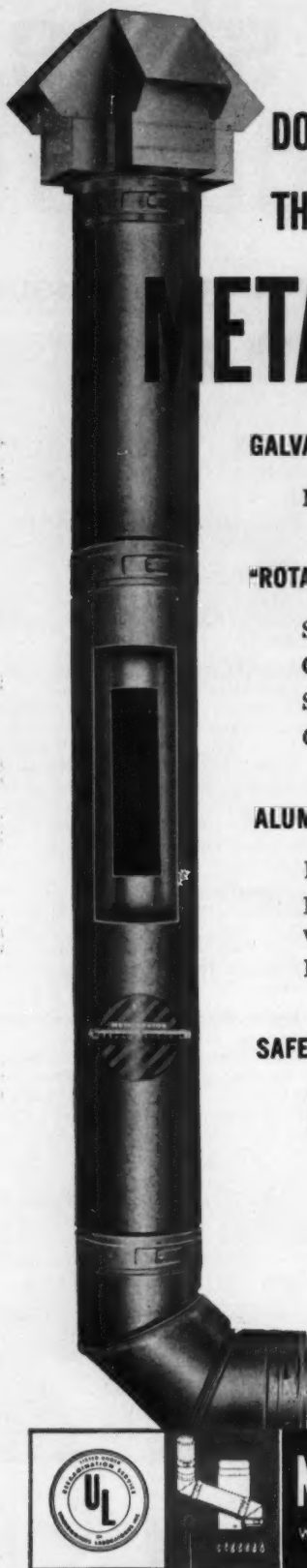
**And they're POWERED to improve your profit picture, too!** Chevy for '60 offers a wide choice of better-than-ever power plants; in every weight class you can choose from famous economy 6's or V8's that lead the field for efficient short-stroke design! Three big sixes and four advanced V8's allow you to match the engine to your job for top performance.

Chevy's 1960 trucks with *total newness* are now on display at your Chevrolet dealer's, so stop by sometime soon! . . . Chevrolet Division of General Motors, Detroit 2, Mich.



# with total newness!





DO IT RIGHT,  
THE FIRST TIME, WITH

# METALBESTOS

## **GALVANIZED STEEL OUTER WALL**

Maximum strength and permanence.

## **"ROTA-LOCK" COUPLERS**

Saves valuable installation time.  
Gas tight.  
Strong and fool-proof.  
Can be easily disassembled.

## **ALUMINUM INNER WALL**

Keeps flue gases hot.  
Exhausts combustion gases quickly,  
without condensation.  
Resists corrosion and assures long-life.

## **SAFETY SEAL**

Identifies your system as  
correct and safe.

## **"SAFETY SYSTEM" GAS VENT TABLES**

Assure correct gas vent design.  
Saves you installation time.  
Write Dept. M-11.



## **METALBESTOS** DIVISION

WILLIAM WALLACE COMPANY • BELMONT, CALIF.

Manufacturing Plants in Belmont, Calif • Logan, Ohio

behind the  
scenes **BPN**

### **We'll really get through to you, Mr. Sengoku!**

Last month in this column, we spoke of a visit to the BPN office by a Japanese LPG man. Mr. Sengoku wanted basic information on LPG. Since he read no English and spoke the language only a little, he brought an interpreter. But the interpreter knew little about LPG, and somehow we had the feeling that we just were not getting through.

The October issue had barely gone to press when word came that the problem would soon be solved. Mr. Sengoku would soon be able to read all about LPG and in his own language!

The word was from Philadelphia—from the Book Division\* of the Chilton Co., publisher of BUTANE-PROPANE News. A memo from the division informed us that the "Handbook of Butane-Propane Gases," edited by two BPN staffers, Lynn C. Denny and Lester L. Luxon, would soon be published in a Japanese version. The division had sold Japanese language reprint rights to Yosetsu News Shuppankyoku of Tokyo.

We suggest, therefore, Mr. Sengoku, that you contact Mr. Yosetsu. Or would it be Mr. Shuppanyoku?

At any rate, we've now given up the thought of having to take a night school course in Japanese and all is well with the world . . . until the next foreign visitor strolls into the BPN office.

\* Besides 17 business magazines, the Chilton Company publishes several hundred books on a wide range of subjects. The fall publishing list will give you an idea of the healthy diversification enjoyed by BPN's publisher. Among the 32 new fall books are: "Adventures in Algeria" by Alexander Dumas; "Forecasting the Price Level, Income Distribution and Economic Growth"; "A Pictorial History of Television"; "I Reclaimed My Child"; and "My Fight for Sanity."

BUTANE-PROPANE News

NOW YOU CAN HAUL

11,800  
WATER  
GALLONS



## WITH LUBBOCK MACHINE ENGINEERED T-1 TANKS

The new ASME Code and Lubbock Machine "higher payload" engineering means you can now haul 10,600 net gallons of propane in some areas with the Bodyload-and-Pup unit shown above.

***There is a difference in T-1 Tanks!  
Lubbock Machine Engineering is the difference***

Through experience Lubbock Machine has found there are many ways that T-1 steel can be used to increase your payload. Let us show you how Lubbock Machine experience in engineered transport tanks can solve your payload problem . . . write, wire or phone today.



**LUBBOCK**

MADE BY  
LUBBOCK MACH & SUPPLY CO LUBBOCK, TEX

**MACHINE & SUPPLY CO., Inc.**

P. O. DRAWER 1589

PO 2-5261

LUBBOCK, TEXAS

**Toughest workhorse on the "line"...**



# FISHER TYPE 722V

**tackles  
tank regulating jobs  
where other regulators fail**

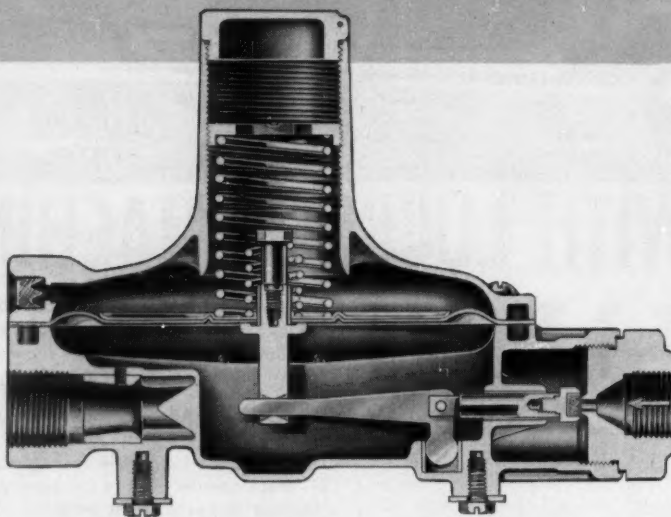
- Excellent resistance to freezing
- $\frac{3}{8}$ " orifice gives high capacity on second or first stage service
- Outstanding flow performance

There's no other bulk tank regulator in the same league with the Fisher Type 722V when it comes to freeze resistance, capacity, size, precision performance and heavy duty construction.

The sheer power of this Fisher workhorse makes it the most wanted tank regulator. With appropriate specifications and orifice size it can be used as a first stage, single stage or second stage regulator on the big, high capacity, bulk tank applications. Internal construction keeps flowing gas from contact with diaphragm or lever linkage to give unparalleled resistance to freezing.

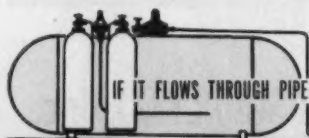
Any wonder, then, why the Fisher Type 722V is the one the whole industry looks to when the roughest bulk tank regulating jobs are to be done.

*Send for free bulletin, today.*



Can be supplied with  $\frac{3}{8}$ " orifice and  $\frac{3}{4}$ " NPT inlet and outlet connections.

STAGE	TYPE No.	INLET CONN.	OUTLET CONN.	ORIFICE SIZE	SETTING INLET	PRESSURE OUTLET
Single	722V-102 (722V-41)	Female POL	$\frac{3}{4}$ " NPT	$\frac{1}{4}$ "	75 psi	11" W.C.
First	722V-104 (722V-51)	Female POL	$\frac{3}{4}$ " NPT	$\frac{3}{8}$ "	75 psi	10 psi
Second	722V-101 (722V-244)	$\frac{3}{4}$ " NPT	$\frac{3}{4}$ " NPT	$\frac{3}{8}$ "	10 psi	11" W.C.



IF IT FLOWS THROUGH PIPE ANYWHERE IN THE WORLD...CHANCES ARE IT'S CONTROLLED BY...



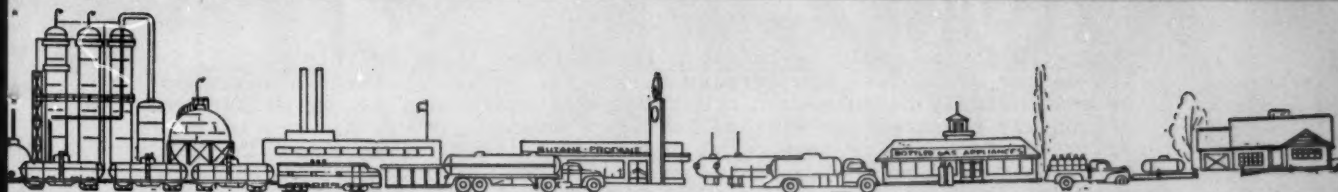
**FISHER GOVERNOR COMPANY** Marshalltown, Iowa

SINCE 1880



# HIGHLIGHTS

BPN



The LPG industry was on the edge of its chair as this issue went to press in mid-October. Along with the rest of America, the industry was waiting to see what would happen in the steel strike. Stockpiles had dwindled and the entire nation was on the brink of really beginning to feel the effects of the strike that was now three months old, the longest in history.

The strike's impact on the nation's near future was assessed in an early October survey by the National Association of Purchasing Agents. Consensus was that the strike had lasted too long to enable business to avoid serious "dislocations"; that while many manufacturers were just beginning to curtail production, the supply lines were already just about empty; "and that the prospects of good business in the immediate months ahead are tied directly to an adequate and steady steel supply."

How has the strike affected the appliance manufacturing industry? At the suggestion of the Department of Commerce, the Institute of Appliance Manufacturers surveyed the industry in late September. Fifty-nine appliance manufacturers were contacted, according to IAM's official publication, "Home Appliance Builder." The big question was: "If the strike continues, how soon will you have to shut down?" Two companies said they would have been closed already, if they weren't running on a limited basis, using premium steel. Thirteen said they would be forced to close by October 15 and 15 more said they'd have to by October 31. Thus nearly half of the surveyed manufacturers should be shut down as you read this, since even a presidential injunction under the Taft-Hartley Act couldn't bring about a sudden supply of steel. Should the steel shortage last until November 15, another 10 will close shop. And, you can add 14 more if it doesn't end by November 30th. Some of these firms had already laid off substantial numbers or were running on a shorter work week.

Most critical of the shortages, according to the IAM-surveyed manufacturers, involved cast iron burners, range tops, blower wheels, and purchased screw machine products. The appliance men agreed that their principal worries are still ahead. Even if the steel men go back to work under the injunction, it would be several weeks before the steel would get to the appliance makers. Then, there is usually a four-to-six-week lag from the time steel arrives at the appliance plant until it emerges in a finished product. The surveyed manufacturers expect steel allocations to be in effect for four to six months after the strike is finally settled. Meanwhile, some are using substitute materials, especially for enameling stock. This can detract from overall quality and may produce future service headaches.

A further worry facing industry is that the Great Lakes may freeze over before the mills can lay in an adequate supply of iron ore for the winter. The ore fleet has been idle, since it is manned by marine members of the steelworkers' union. Should the shipping season end with ore stocks at low level, the "Wall Street Journal" foresees "at best, expensive and uncertain rail handling of ore during the winter months. At worst, the prospect is for shortages and dislocations which could shut down some mills or cause them to curtail operations."

# HIGHLIGHTS

Thus, the nation could be in for a little tough sledding this winter. The LPG dealer could feel the effects in several ways. Appliance sales might be down, simply because enough units aren't available. If the dealer hasn't adequately prepared for winter, he might have to curtail his new business activity, for lack of tanks, cylinders, etc. And in areas where the economy is closely tied to the steel industry, customer credit may have to be extended.

Appliance sales ran up healthy totals in August, the latest month for which figures are available. GAMA monthly telegraphic reports revealed that compared to August, 1958: gas central home heating equipment was up 24.1 per cent; gas ranges were up 9.4 per cent, gas automatic hot water heaters were up 16.6 per cent, and gas dryers were up 22 per cent.

LPG production and storage is also looking very healthy in the latest figures. For the month ending September 15, production of LP gas and liquefied refinery (L. R.) gas totaled 862 million gal., as compared to 722 million gal. for the same period last year. Total inventories of LP gas and LR gas on hand September 15 also showed a comfortable increase over last year, 1206 million gal., as opposed to 898 million gal.

One of the giants of the LPG production industry, Sid. W. Richardson, died September 30th of an apparent heart attack. He was 68. His widely diversified holdings were estimated to have added up to one of the nation's largest fortunes. A fitting final tribute was paid him by the weekly, "Oil and Gas Journal," which called him "one of the most successful of a dwindling clan of colorful oil men who made, lost, and recouped fortunes several times in the first half of this century."

One of the most encouraging safety news items is the Texas Firemen's training school held at Texas A & M College. Hundreds of firemen from all parts of Texas took part. After several hours of classroom sessions, the students faced the real thing. Four played hoses on a domestic tank licked by 50-ft-high flames while a fifth inched in to close the valve and put out the fire. This procedure was repeated again and again until a new confidence replaced the fear that comes from dealing with the unknown.

Safety news of a different sort involves a little known use of LPG--as a propellant in various types of aerosol bombs. A small but heated controversy has developed in the aerosol industry over advantages and disadvantages of using butane, propane, and other hydrocarbons to pressurize aerosol. More information on the controversy will appear in an early issue of BPN.

Notes of the Season: Supplementing the Christmas promotion material already available, AGA has a 24-page color booklet featuring the Jimmy Stewarts promoting gas appliances as Christmas presents. Intended as a giveaway, mailer, or newspaper insert, it costs 10 cents. Order from AGA Order Dept., 420 Lexington Ave., New York 17. . . . Laclede Gas Co., St. Louis, will inaugurate another season of six 12-hour local radio spectaculars with a pair of shows on Christmas and New Year's. The only sponsor, Laclede limits itself to 10 to 15 commercials for the 12 hours, plays "better music" and such things as "The Messiah" without interruption. . . . To encourage customers to install furnaces in the dead of winter, dealers can follow the lead of Wasatch Furnace & Appliance Co., Salt Lake City. The firm installed a regular LPG-fired furnace on a utility trailer for pinch-hit heat, found the response so good, it had to add two more such units.

it's **RED  
HOT**

it **SELLS  
GAS**

# PORTABLE SPACE-RAY

**RADIANT GAS HEATERS**

**SELL the hottest portable radiant heater ever made for industrial, commercial, or farm use...**

The Space-Ray portable gas heater is a very high capacity unit that produces radiant heat in the most efficient manner possible, for use in "hard to heat" indoor or outdoor work areas. Space-Ray's cylindrical perforated stainless steel heat exchanger surrounds a large cast-iron Turbo-Flame burner. Intensely hot combustion gases are forced out through the tiny holes in the heat exchanger causing its entire surface to glow red hot. This enables the Space-Ray to beam a greater amount of useable radiant heat over a wider area than any other portable heater or salamander of similar BTU input. A safety-guard prevents contact with the red hot screen. Space-Ray, constructed of heavy gauge steel, has a 100% safety shut-off valve for maximum safety. Each 100,000 BTU unit is 36" high, 18" in diameter, weighs 50 lbs, and comes completely assembled. Price to dealer is \$50.00 less 10% 30 day discount FOB Charlotte. 50,000 BTU unit priced slightly lower.

**Produces more than twice as much useable radiant heat as old style salamanders.**



**100,000 & 50,000 BTU SIZES**

**SPACE-RAY**

**"on the job" RADIANT HEAT**

**PORTABLE** where it's needed  
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FOR—INDUSTRIAL PLANTS, INDOOR OR OUTDOOR CONSTRUCTION OR MAINTENANCE WORK, GARAGES, WAREHOUSES, LOADING DOCKS, FARMS, ETC.

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TRIAL  
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Please Ship 1 Trial Unit, \_\_\_\_\_ BTU Size.  
If Not Satisfied I'll Ship Back Within 30 Days.

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another performance "first"  
for

**CertiMatic<sup>®</sup>**

automatic throwover  
regulators...by

**REGO**



*Complete outfits with pigtails,  
mounting bracket, and direct or  
remote indicator available.*



## NEW upright indicator tells the world!

✓ YOUR DRIVERS CAN SEE IT  
from 30 feet away

Not just a vertical red signal, but brilliant, reflective *Scotchlite* in a non-breakable, molded plastic prism shouts its warning to your drivers and customers whenever cylinder replacement is needed. This new eye-catching, vertical signal now is standard on all RegO CertiMatic Regulator Outfits. Drivers can see it without dismounting from truck, a "plus" that saves you money.

performance at its best

CertiMatic outfits combine two-stage regulation and automatic throwover from service to reserve cylinder with uniform delivery pressure on loads from pilot light to 225 cfh (568,000 btu/hr). Body and bonnets are die-cast aluminum—tough, rugged, corrosion-proof. Nylon handle in brass liner resists impact, won't break in freezing weather. Entire unit is RegO quality-built for long-lasting durability, and effectively

✓ YOUR CUSTOMERS CAN SEE IT

sealed to prevent leakage, and entry of water.

convenience for customers.. profits for you

With RegO CertiMatic Regulator Outfits, your cylinder-gas customers enjoy the maximum benefits of LP-Gas dependability. This encourages more uses, results in greater loads. Added sales volume—per stop—means more profits for you.

Once you've installed these low-cost automatic regulators, you can start adding fully automatic gas appliances almost without limit, for each will handle all 7 major gas appliances combined. Uninterrupted service and maintained uniform pressure—the two "musts" if you're looking for profits—now can be yours as never before with new Prism-Signal CertiMatic Regulators made only by RegO.



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it will pay you  
dividends to join!

The **BASTIAN-BLESSING** Company

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WORLD'S LEADING MAKER OF VALVES, MANIFOLDS,  
REGULATORS, AND CYLINDER OUTFITS FOR LP-GAS CONTROL



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**BE SURE** all your  
tanks and your  
customers' tanks are  
full of Warrengas or  
Gulftane **NOW** to meet  
the heavy demands  
of cold weather.

**IT'S  
NOT  
TOO  
LATE!**

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DEPENDABLE SUPPLY  
ALL WINTER  
CONTACT OUR  
NEAREST  
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**WARRENGAS**  
*the Concentrated fuel*



**WARREN PETROLEUM CORPORATION**

**TULSA, OKLAHOMA**

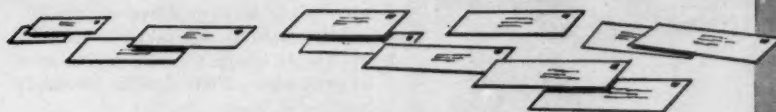
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# Letters

**BPN**

## Heating problem in northern state

Minnesota

We have a proposal to heat a large hotel, bar and dining room but before giving the prospect a bid we need considerable information on the piping and vaporizer.

We have a very reputable conversion burner man to install burners in the boilers. The boilers are one 15- and one 11-section. I do not have the name of the boilers at hand but have computed the capacity of the burners to be approximately 25 gal. of propane per hour. We propose to use three 1000-gal. tanks. We will have to set the tanks about 400 ft from the boilers. The tanks are above ground.

I would like to have your recommendation as to the type and size vaporizer to use, the size pipe you would recommend to the boilers, and whether a high or low pressure system would be best from the tanks to the boilers. We had given considerable thought to using a high pressure system as we thought that we could use smaller piping and also avoid the possibility of any freeze-up.

Could we use butane up here and use a gravity feed into the vaporizer and from there run high pressure butane vapor below the frost line to the boilers? I am not sure the additional investment to insulate the pipe would warrant the savings or if we might have trouble with the butane reliquefying in the line.

F. M.

Twenty-five gallons of propane per hour represent nearly 900 cu ft of vapor or about 2.3 million Btu per hour. The "Handbook Butane-Propane Gases" contains tables for sizing both high and low pressure gas lines.

We would recommend transmitting the gas to the boilers at 5 or 10 lb and then reducing it to the proper operating pressure. It would require a 1½-

in. standard pipe or 1½ ODT Type K copper tubing to transmit the above quantity of gas with not over 1-lb drop in pressure.

Obviously, the minimum size vaporizer that would serve the above equipment is 25 gal. A little excess capacity is good practice so a 30 to 40-gal. capacity vaporizer is recommended. Direct-fired, steam or hot water type vaporizers are available. They can be installed at the storage and the vaporized fuel transmitted to the boiler, or, using extra heavy pipe, the liquid can be transmitted and the vaporizer placed fairly close to the boiler equipment but outside the buildings. It is usually well to have direct vapor lines from the tanks for direct vapor draw during mild heating seasons, thereby eliminating conversion cost of liquid to vapor.

We believe you would have insufficient pressure with straight butane in your locality. If it is a mix with adequate propane to insure 10-lb pressure in the coldest weather, you should not experience reliquefying trouble if you bury the gas line below frost line as required for all L. P. gas vapor piping.—Ed.



## Temperature correction

Wisconsin

We are required to make temperature correction in retail deliveries of bulk propane. We wish to find charts, slide rules or any device that will help our delivery men in this respect.

B. O.

Factors for making temperature corrections are on page 51 of Handbook Butane-Propane Gases. Similar tables can be obtained from the Natural Gasoline Association of America, 421 Kennedy Bldg., Tulsa, Okla. Request NGAA Publication No. 2142-57, entitled NGAA Standard Factors for Volume Correction & Specific Gravity Conversion of Liquefied Petroleum Gases.

A calibrated thermometer on the market indicates the amount of correction to be made to metered quantities of liquid L. P. gas. Meeder Equipment Co., 1745 N. Eastern Ave., Los Angeles, Calif., has it.

Temperature compensating liquid meters are now available. At least one company, Neptune Meter Co., 19 West 50th St., New York, has this device. It can be added to some models of their older meters.—Ed.



## Taking stack temperatures

South Carolina

Please furnish me with the following information: The maximum allowable stack temperature for a gas furnace and at what points it should be taken and the method used.

J. W. D.

The allowable temperature and the location for taking the temperature varies for different types of appliances.

The following information is taken from the AGA approval requirements book entitled "American Standard Approval Requirements for Central Heating Appliances":

**Forced Air Furnace.** The temperature shall be taken in a plane perpendicular to the axis of the flue immediately before the inlet of the draft hood. The temperature of the gases as they leave the furnace and enter the draft hood at this location shall not exceed an average of 480 deg. F above room temperature. The average referred to is the average of temperature taken at several points in a plane across the flue.

**Floor Furnaces.** The same location is used to take the temperature, but the average maximum temperature allowed is 530 deg. F above room temperature.

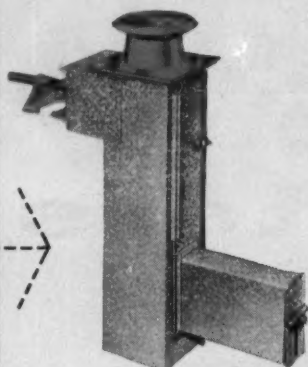
**Recessed Wall Type Heaters.** The average maximum temperature for

# Sell 600 lbs. LP-gas/year

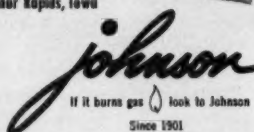


You sell more than an automatic stock tank heater when you sell Johnson. You sell an average of 600 lbs. of LP-Gas per heater per year. The dependable, weather-proof Johnson Stock Tank Heater is easy to sell, too.

Cattlemen and dairymen know their stock do better, profit more, when their water is at a drinkable 48°. And the Johnson Stock Tank Heater maintains that temperature in the coldest weather. It's safe, efficient and very easy to install. Profit twice with the Johnson Stock Tank Heater.



Write for catalog of Johnson's complete water heating line.  
**JOHNSON GAS APPLIANCE CO.**  
597 E Ave. N. W.  
Cedar Rapids, Iowa



## Letters • Continued

this type of heating appliance is 380 deg. F above room temperature. However, the location at which the temperature is taken is different.

Temperatures are taken in an outlet 3½ ft above the flue outlet in a 24-gage pipe. This is after the draft hood.—Ed.



## Codes covering the L. P. gas industry

*Georgia*

As an engineer, I would like information which would enable me to intelligently design a heating system using L. P. gas as the fuel.

A friend of mine in your industry tells me that you might be a source of Pamphlet No. 58 of the National Fire Protection Association. He said also that a number of pamphlets have been written from time to time in dealing with recommendations on tank specifications and sizes, pipe sizes, specifications on pressure regulators, etc. We would appreciate it very much if you could supply us with any further information. T. M. J.

Pamphlet No. 58 is the code which covers the installation of L. P. gas systems. Pamphlet No. 54 covers piping and appliance installations more specifically. Both pamphlets can be obtained from the National Fire Protection Association, 60 Batterymarch St., Boston, Mass.

You should also have the American Gas Association Laboratories' Directory of Approved Appliances & Listed Accessories. Their address is 1032 East 62nd St., Cleveland, Ohio.

The Underwriters Laboratory, 207 East Ohio St., Chicago 11, Ill., test and approve equipment for use in the L. P. gas industry. They publish a list of approved equipment including L. P. gas equipment.—Ed.



## Radiant heat recommended for concrete slab

*Indiana*

We have an inquiry concerning heating a slab of concrete in a hog farrowing house.

This house will be approximately 32-ft long by 28-ft wide. There will be four stalls down each side with

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**BY ARKLA**

For full specifications and prices, please write Arkla • Gaslite Division Shannan Building Little Rock, Arkansas

a drive through the middle. We are concerned with heating a strip of concrete 12 to 14 in. alongside the drive for the little pigs. There will be no building insulation.

Could this strip of concrete be heated successfully by a warm air system? Would it be cheaper to install and operate than a boiler?

S. M.

If the hog farrowing house has not been constructed I would suggest that the strip be heated by radiant heat from wrought-iron pipe or copper tubing laid in the concrete. Warm water is then circulated through the tubes and the floor temperature controlled very accurately by the water temperature. The water is heated in an automatic-type water heater, and circulated by a small pump. This is an efficient method of heating a localized area.

If the floor has been poured, it is still possible to provide radiant heat with a hot water system, by placing the pipes or radiators along the wall with reflector panels behind them to help direct the heat to the area desired.

In both cases the water should be protected against freezing with a suitable antifreeze solution if there is a possibility that the heater and circulator may be turned off in freezing weather.

A warm air system may be adapted, but we feel it will be more expensive as the duct works will be larger and require insulation and protection.—Ed.



## Cost of househeating

Ohio

A housing project is scheduled to be built near us. We have been in contact with the builders about supplying L. P. gas. They asked what the cost for heating would be per year. The blueprint of the houses they are going to use shows a heat loss of 61,153 Btu.

We would like to know how much it would cost per year to heat this house. We sell bulk gas at 15½ cents per gal. E. R. G.

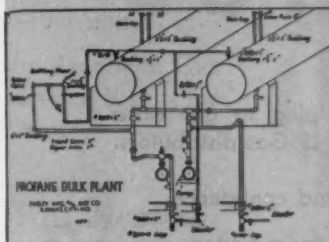
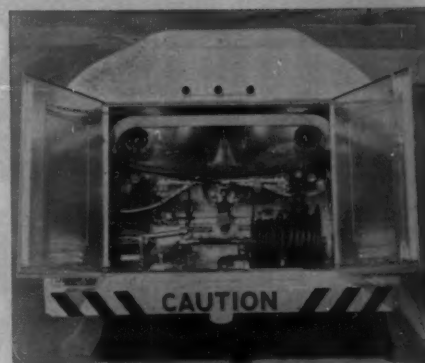
Since you did not give us sufficient information, we had to make an assumption and a compromise, but we were able to come up with an answer. The houses you would like to supply should cost about \$243 per year to heat. The assumption was that you wanted to follow the standard practice of a 70 deg. design tem-

**Your One Supplier with everything in L. P. gas and Anhydrous Ammonia Equipment**



"The Loadmaster" LPG Truck Tank

**PASLEY-DESIGNED** Truck Tanks (see above and right) were first to feature all controls from one location. All operation is from one point—rear compartment.



**BULK PLANTS** Pasley LPG and Ammonia type installations—a turnkey job or engineering for your own installation. Write, wire or call.

*Also a complete line of accessory equipment.*

## "Pastels By Pasley"

**COLOR—The Modern Trend!** Bring your LPG Equipment up to date. Available in the following colors . . . (write for information)

Blush Peach	Smoky Grey
Sunshine Yellow	Seafoam Blue
Mustard Lime	Wedgewood Green
Eureka Orchid	Rose Beige
Lake Blue	Desert Rose



**"EVERYTHING IN LPG AND ANHYDROUS AMMONIA"**

# The Pasley Mfg. & Dist. Co.

601 East 13th Street • Kansas City, Mo. • Tel. Victor 2-2369



## Letters • Continued

perature. The compromise was that—since we did not have weather bureau figures for your community—we had to figure on the basis of the nearest large town, Pittsburgh.

However, because the builder may have a different design temperature in mind and because you may be able to get a more local degree-day figure from your local weather bureau, we will give you the formula to work out for yourself. (The figures would not vary too greatly from the one quoted above, however).

To begin the problem, you first find the Btu input the house would require in one year. Divide your Btu per hour heat loss by your design temperature and multiply that figure by the number of hours in a day and the number of degree days per year in your community. In your case, that worked out like this:

$$\begin{array}{r} 61,153 \\ \text{---} \times 24 \times 5048 \text{ (deg. days =)} \\ 70 \\ 105,839,396 \text{ Btu per year.} \end{array}$$

Then, to find the number of gallons of LPG this amount of heat will require, you divide by the number of

Btu per gallon of LPG. (To make your figures still more accurate, you might substitute your own Btu per gallon figure, if one is available for your gas.) However, because the average gas furnace is only 73.5 per cent efficient, you first multiply your Btu per gallon figure by .735:

$$\begin{array}{r} 105,839,396 \quad 105,839,396 \\ \text{---} \quad \quad \quad \text{---} \\ 91,690 \times .735 \quad 77,392 \\ 1570.5 \text{ gal. per year.} \end{array}$$

Then the gallons per year figure is multiplied by cost per gallon:

$$1570 \times 15.5¢ = \$243.42.—\text{Ed.}$$



## Chemical carrying barges have drying problem

Alabama

We have a customer desiring information on heaters to be used in drying out barges. The barge is 300 ton, has six compartments, approximately 12 x 20 x 10 ft deep.

This barge is used to transport chemicals and is coated inside with a special rubber compound. It has to be washed out with water after each load, and inspected.

This customer thinks he can get a butane heater with flexible hose to move from one compartment to another. We felt this would be a very dangerous procedure, so wanted your opinion. The same customer is using a small steam radiator approximately 13,000 Btu with blower to dry out smaller tank cars. A.L.C.

We suggest your client obtain a gas fired industrial type air heater with complete automatic safety controls for use with L. P. gas. The heater and burner mechanism should be kept on deck, and the warm, dry air conducted into the compartments through hose or other suitable duct. An opening should be provided for moist air to escape.

Placing the heater in the compartment is an unsafe practice. Several very serious accidents have occurred when heaters have been placed in unventilated rooms or compartments. The air circulation within the room and the oxygen content of the air is reduced until it will not support combustion, and often forms dangerous concentrations of carbon monoxide.





Placing the heater in the compartment will make the compartment wetter, instead of drying it out, unless some provision is made for exchange of air with the outside. The products of combustion contain water vapor and would add to that already in the compartment.—Ed.

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-  TRUFLAME adds prestige and confidence.
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*at a really good price!*

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These days, both dealer and builder need heaters that are *topmost* in quality and *lowest* in price—to land the business.

And Suburban has *both*—the quality and the price. The Suburban Gas-Fired Wall Heater was *built* for business-getting. It's the best value on the market today—bar none!

Tested and approved by the American Gas Association, it *had to be good*—and it sells for plenty less than other wall heaters.

## *New! Counter-Flo Wall Heaters*

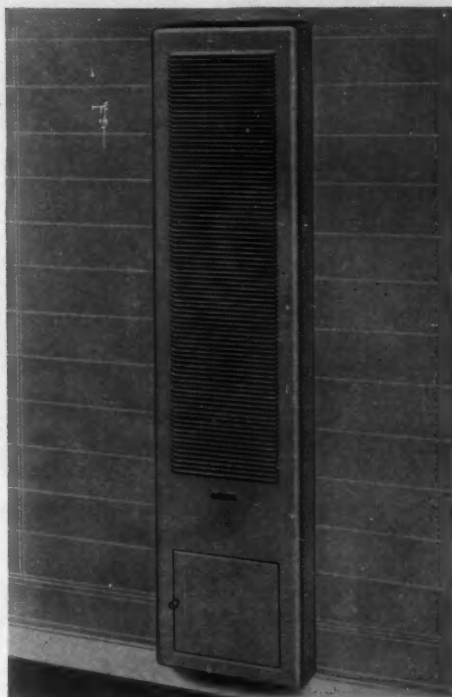
*Forced air for the finest heating comfort!*

For those who demand the finest forced-air heaters, Suburban has just that. More compact, better looking, the heat is fan-forced down, heating cold floors first—then the whole room *evenly*. Factory-installed controls. Heat exchanger guaranteed for 20 years. Single or dual wall models, to 50,000 B.T.U. A.G.A. approved.

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MADE BY THE MAKERS OF FAMOUS SUBURBAN BUILT-IN RANGES



**SUBURBAN** is easier to install than other heaters. **MAIL THE COUPON** now and get set for a low-low bid on your next project.

**GUARANTEED** Suburban guarantees its one-piece porcelain enamel combustion chambers for 10 years.

**FLOOR FURNACES** with the price and quality that can't be beat are Samco Floor Furnaces. Get the facts about them.

## MAIL THE COUPON NOW!

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Send details and price information on: Suburban Gas-Fired Wall Heaters ☐ Counter-Flo Forced Air Wall Heaters ☐ Samco Floor Furnaces ☐

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City \_\_\_\_\_

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## Today's smallest two-way mobile radio - actual size!

### *New General Electric Transistorized Progress Line*

General Electric's new Transistorized Progress Line will fit in more places, in more different positions, than any other two-way mobile radio you can buy today.

Not only is this the world's smallest, lightest commercial two-way mobile radio, but standby battery drain is so low you need never turn off your TPL mobile unit, just like the clock in your car. You install no special generator, use less gas, require fewer engine jobs.

TPL is the first two-way radio that transmits up to 75 watts of power in high band . . . the first that really fits under the dash . . . the first to realize the full benefits of transistorized design (no more than four tubes) . . . the first to eliminate bulky cables through new one-piece design of receiver control and transmitter . . . the first with shielded dirt-free ventilation.

The new General Electric TPL ushers in a new era of convenience and reliability in mobile communications. Don't miss all the exciting details. Write General Electric Company, Communication Products Department, 5119 Mountain View Road, Lynchburg, Virginia.



**GENERAL  ELECTRIC**

**Communication Products Department**



# WASHINGTON REPORT

by NEIL REGEIMBAL, Washington Editor



**Business fared well  
during this year's  
Congressional session**

★ WHEN IT ADJOURNED IN MID-SEPTEMBER, the current Congress hadn't changed things much for the business man. No major anti-business measures passed. A few bills sought by business did pass, but many, including one to raise REA interest rates and another to tax farm cooperatives, did not. Except in a few minor cases, President Eisenhower won his fight against inflationary big-spending proposals. Next year, however, it will probably be a different story as Democrat congressional leaders try to win back some ground from the White House. (Details on page 72.)

**New labor law  
important to  
all small firms**

★ MEMO TO SMALL BUSINESSMEN: the new labor reform law is important to you. Unions are stepping up efforts to organize small firms and white collar workers to offset other losses. Therefore, three provisions of the new labor law are particularly important. The first ends that jurisdictional no-man's land, for the first time giving state agencies and courts jurisdiction in some disputes which federal agencies refuse to handle. The second prohibits almost all secondary boycotts. The third puts strict curbs on organizational picketing. (Details on page 72.)

**New highway-fuel tax  
applies to LPG**

★ AN ADDITIONAL ONE-CENT-PER-GAL. TAX is now in effect on all LPG used as fuel in highway vehicles. This extra tax applies to all other petroleum products used on the highways. The extra penny was added by Congress recently as a special tax to bail the government's highway building program out of its money troubles. Vehicles used on farms, construction projects, or for other non-highway uses are exempt. The special tax will continue until July 1, 1961, when the highway program will get extra money by taking a bigger cut of the excise taxes on new cars.

**Farm co-op taxes  
to be studied  
in December**

★ CONGRESS WILL SOON STUDY THE NEED FOR TIGHTENING TAX LAWS governing farmer cooperatives. On December 14, a panel of tax experts will discuss the current court-created loophole which permits co-ops to escape paying taxes. The panel is part of the opening phase of a detailed tax study by the House Ways & Means Committee. After the panel, the Committee plans public hearings. It will spend most of next year's congressional session hammering out a massive revision of the tax laws. (Details on page 70.)

**REA co-op vs. electric  
utility squabble settled by  
Senate in favor of co-ops**

★ A SQUABBLE BETWEEN RURAL ELECTRIC CO-OPS and private power companies has been settled by the Senate—in favor of the REA co-ops. The issue arose when the General Accounting Office ruled that the law prevents REA loans from being used to extend a co-op line to a customer on a private power line who could get private power. The co-ops complained. The Senate settled the dispute by approving a resolution saying government loans can be used to supply power to a customer as long as he is not then getting central electric power and "without regard to whether such service is otherwise available."

**TVA sales  
up 6 per cent**

★ IN THE FISCAL YEAR ENDING JUNE 30, the Tennessee Valley Authority sold 16.6 billion kw hours, 6 per cent more than in the previous fiscal year. Residential customers used 9.5 billion kw hours, also a 6 per cent boost. Average residential usage was 7,864 kw hours, more than double the national average. TVA now has 1.2 million residential customers.

# NEPTUNE LP-

## Complete Truck Metering System in One Space- Saving Unit

**Nothing extra to buy... only 3 connections to make**

To measure liquid LP-gas accurately and safely under all conditions, you not only need a meter, you also need *six* different accessories: vapor release, strainer, pressure relief valve, inlet check valve, differential valve, and vent line check valve.

The Neptune LP-gas meter has *all* accessories built-in. It's a complete, accurate system that requires only *three* connections. Nothing extra to buy... fewer chances for leaks... fewer chances for improper installation... and takes less space.

What's more, Neptune's unique design of vapor eliminator and differential valve positively prevents metering of vapor in the system under *all* conditions. Always easy on your pumps. Never needs adjusting from hot weather to cold. Backed by nation-wide network of Neptune-operated service centers.

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# -GAS METER

## VENT LINE CHECK

**VALVE:** Permits cleaning strainer or opening meter without depressurizing supply tank. No need to shut off valve in vent line.

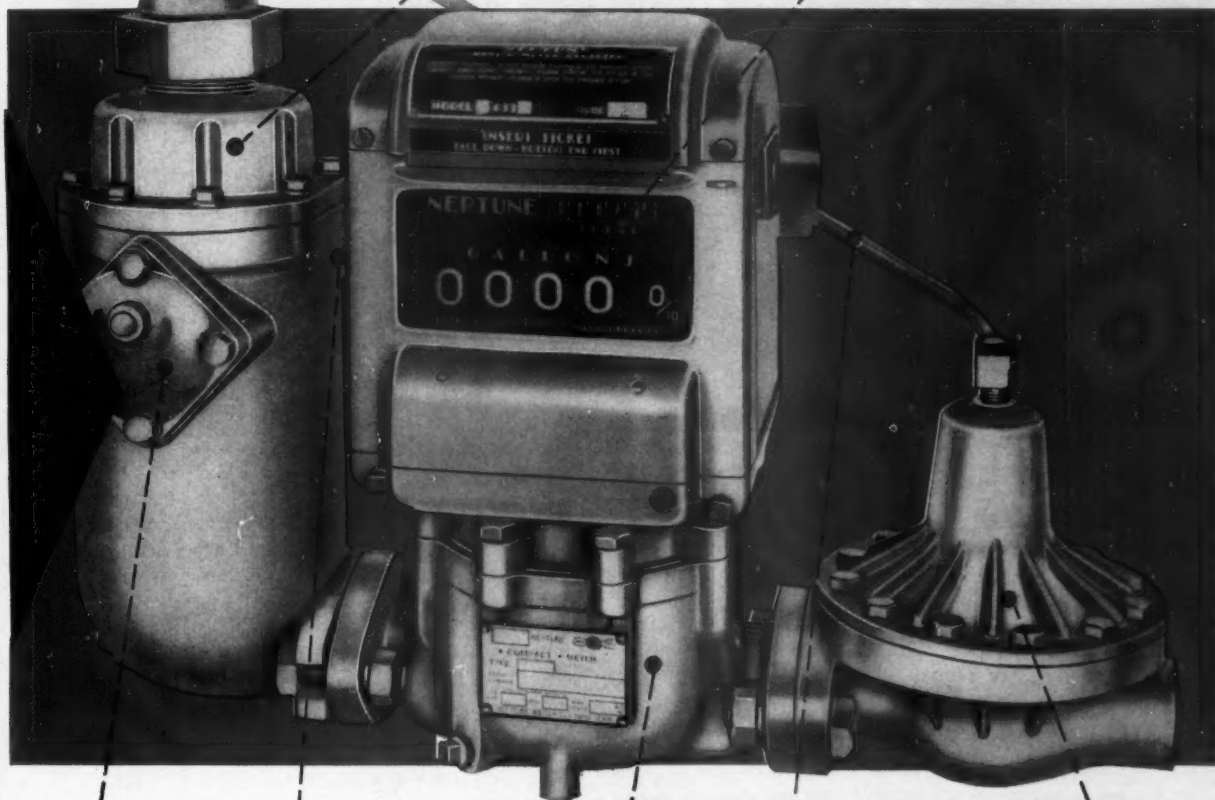
## PRESSURE RELIEF:

Actuates at 250 psi. to prevent damage to meter or installation in case of overpressure. Vents back to supply.

## VAPOR RELEASE:

Releases air and vapor from liquid before it enters measuring chamber, insuring accuracy. Excellent capacity. High-pressure float. Vapor is vented back to the supply.

**REGISTER:** Direct Reading or Print-O-Meter type. Easy to operate and read. Print-O-Meter delivers the meter-printed tickets your customers like so well.



**STRAINER:** Removes sediment and dirt from liquid, preventing undue wear or damage to meter.

**INLET CHECK VALVE:** At rear. Prevents backflow of LP-Gas when pump is stopped.

**MEASURING CHAMBER:** Positive displacement type. Only one moving element. Measures liquid by volume. Widely popular for sustained accuracy and long life.

**VAPOR CONNECTING TUBE:** Equalizes pressure between top of differential valve and supply tank.

**DIFFERENTIAL VALVE:** Maintains product in liquid form in meter, and prevents formation of vapor. Low pressure-differential is easy on pumps. Negligible friction loss.

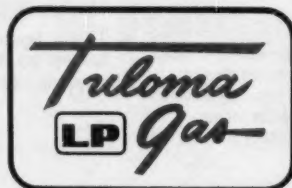


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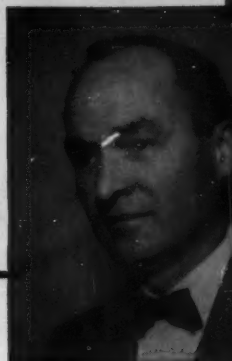


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# Beyond the Mains

With WILLIAM W. CLARK • Editor



## Lessons from Schuylkill Haven

IT WILL PAY YOU TO SEND 25 CENTS to the National Fire Protection Association (60 Battery-march Street, Boston 10, Mass.) for a copy of the recently released report on the Schuylkill Haven, Pa., tragedy last June.

The accident, it will be recalled, stemmed from a rear-end collision which damaged a tanker, causing a leak, followed by a fire and a rocketing explosion which took 11 lives.

The report, written by the well-known NFPA engineer, Clark Jones, is titled "Fatal L. P. Gas Tank Truck Fire." While it does not specifically fix the blame for the accident, it does suggest two areas where further work is needed.

First, Jones urges that additions to Pamphlet 58 be considered in light of the new truck designs not now covered in the code. This recommendation affects every dealer who has bobtails and transports. A large share of today's vehicles are custom-designed according to your own specifications. Are you putting safety considerations above all else when you specify that this item be placed here, that item be placed there? When you specify one type of construction be in preference to another?

No design, of course, could be completely infallible. Therefore, Jones' second point is just as important as the first, if not more so. If an accident happens, do you—and does your local fire department—know how to cope with it?

In speaking of the firemen's actions at Schuylkill Haven, Jones point out that "the fire fighters were not told what might happen to the shell of the tank if the fire was allowed to continue to expose the shell until the contents had boiled away." The limited amount of water available, which might have been used to prevent the tank failure, was instead played on the adjacent dwelling.

Firemen should know the importance of keeping a tank cooled down. So should LPG personnel.

Last month, BPN published an authoritative guide on "How to Handle LPG in Emergencies." The August 1959 issue of *Firemen* had an article on "How to Handle L. P. Gas Vehicle Ac-

cidents." Both of these articles provide simply understood, step-by-step procedures to follow in case of accident.

With materials such as these at hand, there is no reason why every firemen and every LPG man shouldn't know the basic principles to follow in an emergency. Every dealer should clip out his copy and use it to train his personnel. He should also make sure that his local fire department has a copy of either the BPN guide or the *Firemen* article. He should make it his duty to see that both groups are informed—and kept informed. One session will not be enough. With normal personnel turnover, plus a natural tendency to forget, a session every few months would seem to be in order.

## For one disabled thumb, \$70,000

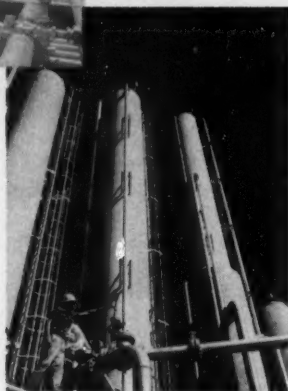
*Speaking of safety*, did you ever stop to consider the high cost of accidents—in real, hard cash?

Here's a real-life example of a minor industrial accident. An employee injured his hand, suffering permanent disability of the thumb, partial disability of the hand. Compensation and medical costs ran \$7000.

Let's suppose for the moment you had no insurance to cover the loss. That \$7000 would come out of profits. But how much would it cost you, really? Suppose your net profit was 10 per cent. It would mean that you would have to sell \$70,000 worth of goods at a net profit of 10 per cent to recoup that relatively small loss.

But you're insured, naturally. Still, that \$7000 must be made up somewhere. If the insurance company pays the bill, it must add about 60 per cent for its own administrative expenses and profits. So somehow it must cover \$7000 plus 60 per cent of \$7000 (\$4200) or a total of \$11,200. Policyholders, then, who actually will be paying for it, must earn (at 10 per cent profit) \$112,000 to recover the cost of their premiums.

Staggering, isn't it? And all the more reason why safety should be your No. 1 concern—ahead of everything else, sales included. It's one place where a penny saved (through accident prevention) is 10 pennies earned!



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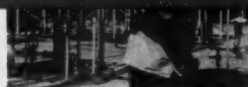
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# DESIGN IDEAS

## *for building a bulk plant*

To provide full production with complete safety, a bulk plant must be very well thought out. Bulk plant design ideas such as these should stimulate your all-important pre-construction thinking.

This material is adapted from the new **Policy & Procedure Book** recently published by Petrolane Gas Service, Inc., Long Beach, Calif. The Bulk Plant Construction Section was prepared by William M. Richard (below), Petrolane safety engineer. These, then, are Bill Richard's ideas on bulk plant design.



**“U**TILIZE the equipment available to you in such a way that you'll get the highest possible production compatible with complete safety.” That's the unwritten directive facing the designer of every LPG bulk plant.

There are many things for the designer to consider, but all come under two categories, production and safety. Both are of primary importance. Production might be said to come first because it is the sole reason for the plant's exis-

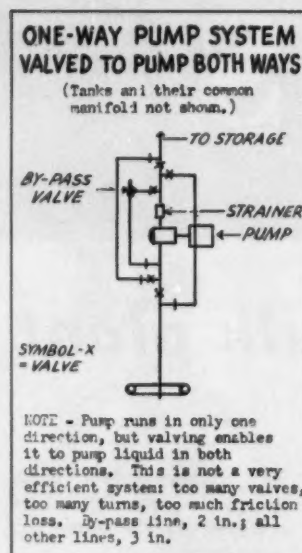
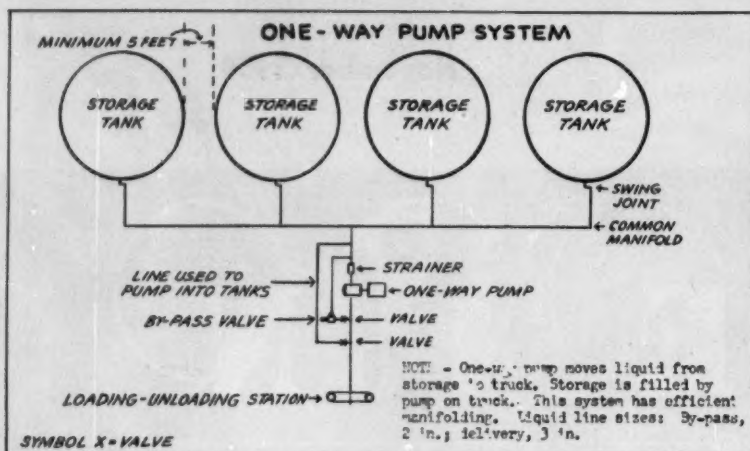
tence. Yet, without safety, there can be no production. So, safety must be placed on the same top level of consideration.

Production means full production. A plant which theoretically can deliver 100 gpm but actually delivers only a fraction of that is not in full production.

Safety means **complete** safety. The plant must not only be safe under all normal conditions. With a product of LPG's nature, it must also be safe under all abnormal conditions.

The tank is the starting point in designing a bulk plant. Assuming that the tank or tanks are large enough for the job (in terms of gallons of storage capacity), two factors determine their production efficiency. They are: (1) The relationship of the bottom of the tank to the pump intake, and (2) the area of the tank openings that supply liquid to the pump.

While there is pressure in the

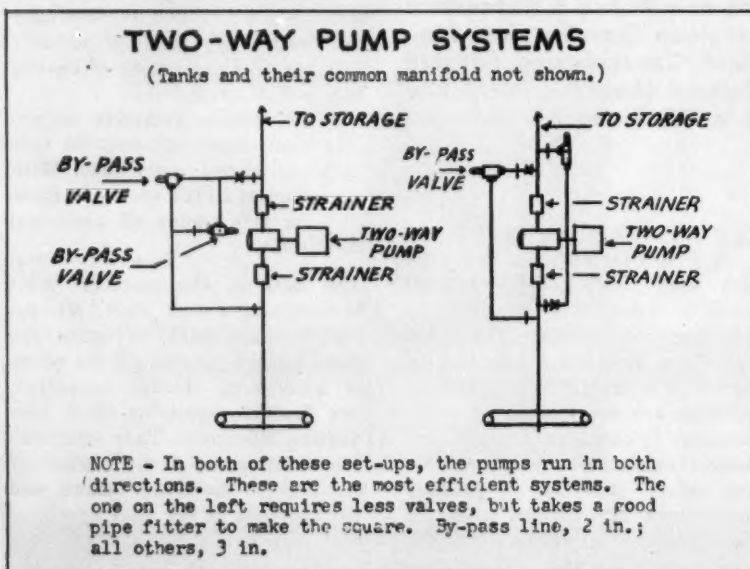


Here are four different ways to lay out a bulk plant. To save space, the storage tanks are shown in only one illustration.

Top, Fig. 1. This system is intended to move the liquid in only one direction, from storage to the truck, the storage tanks being filled by the truck's pump. This system is efficient, if it fits into your operation.

Left, Fig. 2. This system uses a one-way pump, but by a tricky set-up, the pump can both load and unload the liquid. Too complex, this system is not very efficient.

Bottom, Fig. 3. These are the preferred systems. Using two-way pumps, they load and unload efficiently.



tank to force the liquid along the upstream side of the pump to the pump intake, there is an equal or greater pressure on the downstream side of the pump. These two pressures tend to equalize each other. However, a third pressure, that of the weight of the liquid, can be brought into play. When the tank outlet is located above the pump intake, the weight of the liquid helps force that liquid to the pump intake. Naturally, the higher the tank, the more this pressure builds up. For practical reasons, a good compromise is a 3-ft. height difference between the tank opening and the pump inlet.

While the size of the tank openings for both the liquid and the vapor lines affect pump efficiency, the liquid line is more important. If these openings are not large enough to supply the pump to the limit of its capacity, production suffers.

The pump selected depends on how the bulb will be used. A one-way pump can be used satisfactorily in a system (Fig. 1) which pushes the liquid in only one direction, as from storage to truck. By a special valving set-up, a one-way pump can force liquids in two directions, as for both loading and unloading. However, this is not a very efficient system (Fig. 2). Two-way systems are best set up with two-way pumps (Fig. 3).

If it will be unloading transports and loading local delivery trucks, a pump should have a capacity of at least 100 gpm. If a bottle filling operation is also involved, a second, smaller pumper should also be used. It is both impractical and bad business to fill a bottle with a 100 gpm pump through a POL valve.

The liquid manifold line is the connecting link between the opening in the tank and the intake side of the pump. Assuming that the proper pump has been selected, the production of this portion of the set-up depends on two factors: (1) the size of the liquid manifold line, and (2) the length of this line.

Like the size of the tank openings, the liquid line must be of sufficient diameter to completely

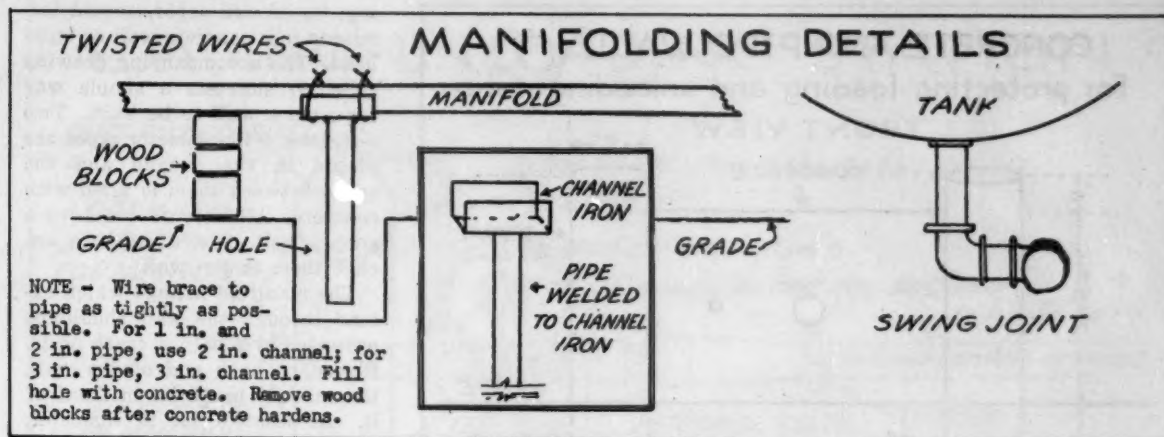


Fig. 4. Shown here are the methods of fabricating and installing pipe supports and a close-up of a swing joint.

take care of the pump's appetite. For a plant using a 100 gpm pump, the main manifold liquid line should not be smaller than 3 in.

The longer the liquid line, the greater is its friction loss. Since friction loss retards the flow of liquid, this brings down production. The liquid line from the tank outlet to the pump intake must be as short as practical. Remember that pumps are better at pushing liquids than at pulling them. Thus, to a considerable extent, the pressure on the intake side of the pump depends on tank pressure, plus the pressure that comes from the weight of the liquid. Therefore, short intake manifold lines with large diameter pipes are essential. When a pump moves liquid in both directions, both pump ends must be considered intakes and designed as such.

**The vapor return line** is not as critical as the liquid line, but it is important and it does add to the over-all efficiency of the system. The function of the vapor line is, of course, to equalize the pressure between the storage tank and the truck tank. When these pressures are equal, the pump merely moves the weight of the liquid. When they are not equal, the pump must buck the added pressure and therefore can operate only at a fraction of its capacity. This happens when a small vapor line is used in conjunction with a large pump.

In place of the conventional pump, many plants use a compressor for loading and unloading. A

compressor, of course, moves the liquid by building pressure in the tank to be emptied and lowering pressure in the tank to be filled. Since the compressor relies completely upon vapor, vapor lines are extremely important in this type of set-up. Naturally, a plant using a compressor requires larger vapor lines than one using a pump. These lines should be figured in terms of compressor capacity. The liquid lines, however, should be the same size as for a pump plant. Since the compressor depends upon light gases instead of heavy liquids, its location in relation to the openings in the tank is not as critical as is that of the pump.

In general, three factors govern the efficiency of vapor return lines.

First, the size of the line should be adequate. For a plant using a pump of 100 gpm or more capacity, the line should not be smaller than 1¼ in. For a compressor plant, the minimum size is 1½ in.

Second, the length and layout of the line should be carefully planned. The shortest possible line with the least fittings and turns will give the least friction and the most production.

Third, the size, capacity, and resistance of the excess flow valves must also be watched carefully.

**Fittings** build friction, slow production. Keeping that in mind when you design a plant, you should use only the fittings that are necessary to do the job. Keep

the manifold as simple as practical, changing the direction of flow only where necessary.

**Building safety into a plant** unfortunately means reducing production. Each safety device creates additional friction loss. However, the prospect of uninterrupted production far offsets such penalties.

The chief tools used to build in safety are: excess flow valves, internal valves, swing check or flapper valves, swing joints, concrete walls or bulkheads to protect loading and unloading lines, and crash posts.

**Manifold safety features** include various types of valves and swing joints. Every tank opening connected to loading or unloading lines must be protected by an internal valve or an excess flow valve. This includes both liquid and vapor openings.

Excess flow valves are preferred in some cases. They are more practical for vapor openings. And, where two or more tanks are manifolded together, they are better for the liquid line as well. Excess flow valves, of course, operate on a velocity flow principle. Therefore, when connected to a common manifold—and especially when that manifold includes a pump—they will not—in all probability—close unless the manifold is broken off close to the tank opening. Thus, they provide good protection at the tank, a sort of last line of defense.

A globe valve or other type of



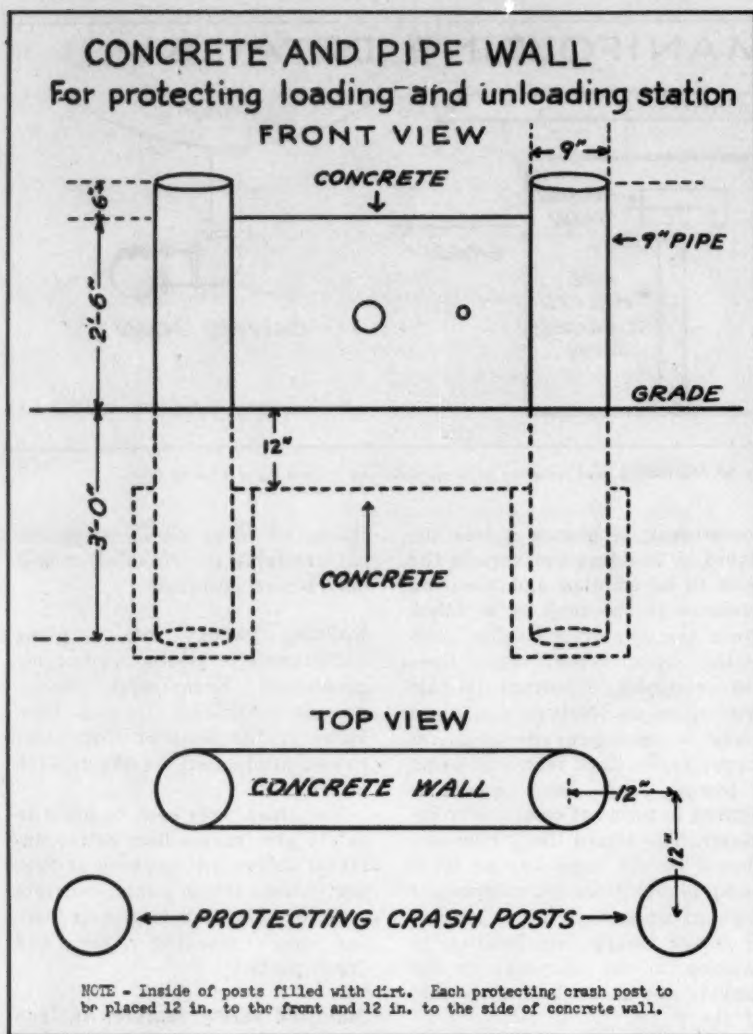


Fig. 5. This type of concrete wall or bulkhead should be installed to protect every loading and unloading pipe, whether it's for liquid or vapor. The wall, itself, should be protected with crash posts. Note how easily the wall can be constructed by merely filling in the space between two dirt filled 9 in. diameter steel pipes, each 6 ft long. Note also the centered liquid pipe hole and adjacent vapor pipe outlet. Piping details of this station are shown on the opposite page.

approved positive shut-off valve should be attached directly to the excess flow valve or as close to it as possible. This affords control of the individual tank.

A nipple and a swing joint should follow the globe valve. The swing joint (Fig. 4) allows motion in two directions and is a definite safeguard in the event of an earthquake or other major disturbance.

**Loading-unloading station safety features** include both those built into the lines, such as valves, blowdown pipes, etc., and those

built around the lines, such as concrete walls and bulkheads and crash posts. These features are of utmost importance since experience has proved that most product accidents at a bulk plant occur at the loading-unloading station.

Generally, the accidents occur for one of three reasons: a truck is driven away before the line is disconnected, a hose breaks, or a coupling pulls out. One of the best ways to minimize damage in such cases is to make sure the lines are firmly anchored. Therefore, all lines, loading and unload-

ing, liquid and vapor, should terminate in a concrete wall or bulkhead. The accompanying drawing (Fig. 5) suggests a simple way for such a wall to be built. Two 6-ft.-long, 9-in.-diameter pipes are placed in the ground and the space between them is filled with concrete. All lines should have a simple lock (Fig. 6) to help anchor them in the wall.

The manifold fittings which extend through the wall should be protected by a pair of crash posts. Placed on each end of the wall, they should be 12 in. in front of it. At least 6 in. in diameter, these posts can be filled with dirt. Other crash posts should be placed around the storage area, wherever required to protect tanks and manifolds from moving vehicles.

If the station is to be used for both loading and unloading, a tee for a blowdown pipe should be installed in the liquid line, just behind the concrete wall. As shown in Fig. 6, the tee should be followed by a globe valve or other appropriate type of positive valve, plus an internal valve. And, as shown in Fig. 7, the release arm of the internal valve is to be connected to a trip post assembly, a fuse link being part of the connection. The drawing shows two different types of releases, either of which are satisfactory. Both are fitted with a cable for remote control release in an emergency.

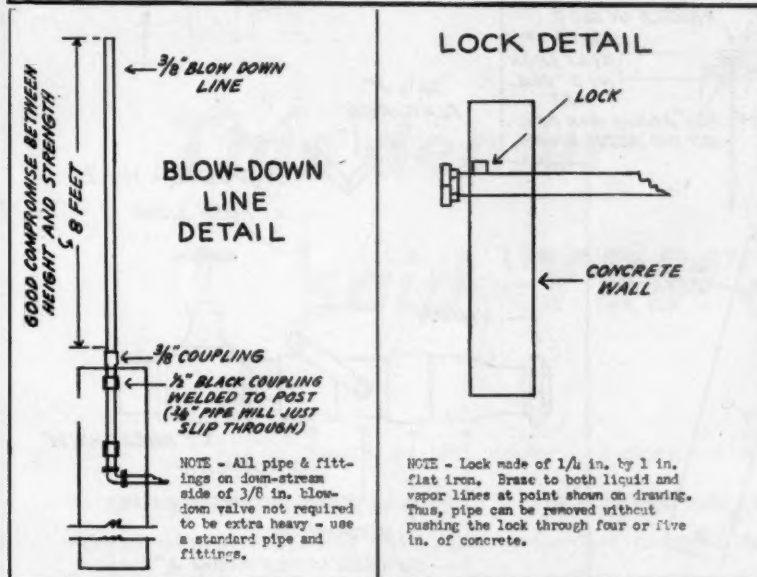
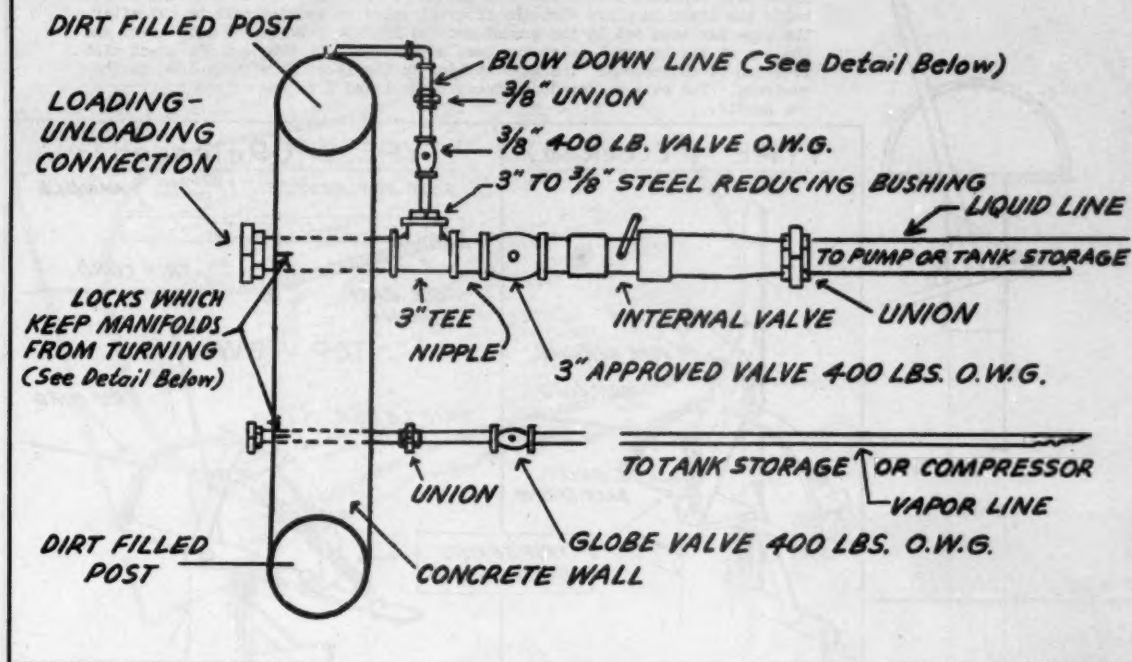
Where the station is used for unloading only, a swing check valve may be installed behind the manually-operated globe valve. Taking the place of the internal valve, the swing check valve should be located in the line so it will allow liquid to flow into storage, but not out.

On the vapor return line, a globe valve should be installed just behind the concrete wall. This is also shown in Fig. 6.

**Safely arranging the tanks** means making sure that no tank will be 100 per cent full. This is accomplished by locating all liquid outage levels at the same height and keeping all valves open.

Work out the arrangement on paper first. Start with the tank with the largest diameter. Your first consideration is the height

# LOADING-UNLOADING STATION



of the bottom of that tank above the pump intake. As stated earlier, a 3-ft. height difference is a good compromise. Now—still working on paper—place the smaller diameter tanks above that 3-ft. level so that all the liquid outage levels are the same. The tops of different diameter tanks will, of course, be at different

heights. If you decide that this looks okay, from both appearance and utility standpoints, you can proceed with the actual installation. If, on the other hand, the smaller tanks appear to be too high in the air, a compromise is in order.

In this case there is just one direction in which to compromise

Fig. 6. At the top is a bird's eye view of the manifolding needed for a loading and unloading station. At the left are two cross-section side-view close-ups of portions of the station manifolding.

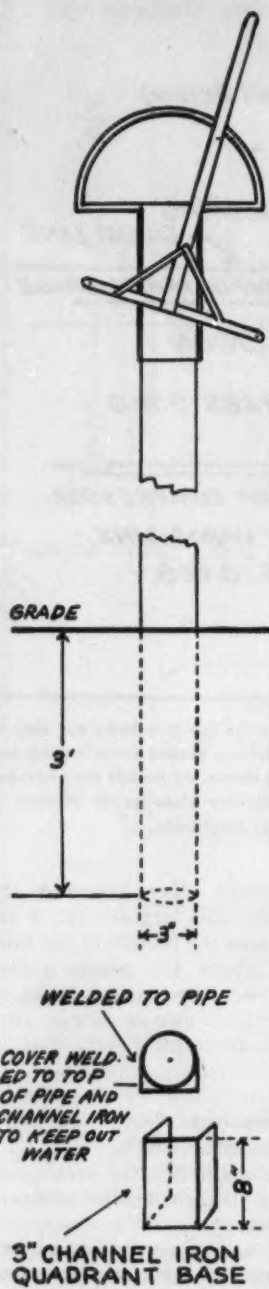
—downward. Try lowering the key tank, the largest one, 6 in. This places the bottom of the tank 30 in. above the pump intake. Now, lower the smaller tanks so their liquid outage levels continue to correspond with that of the key tank.

Five important "do's" for bulk plant designers are:

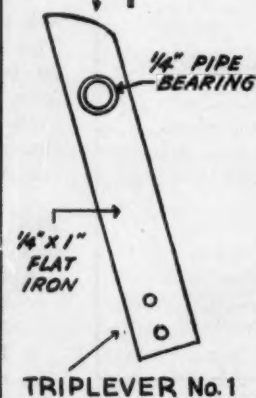
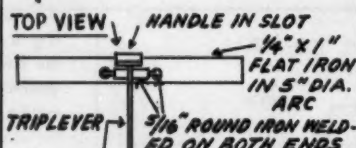
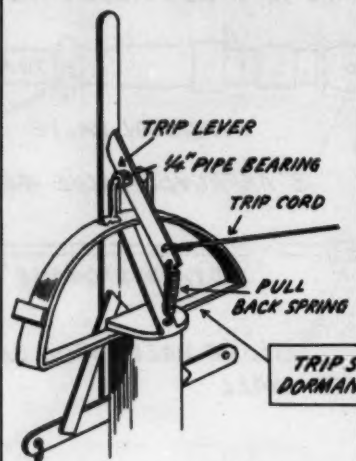
1. Do use only extra heavy pipe and fittings in high pressure lines.
2. Do use only valves and other manifold system equipment that have the proper pressure rating and are approved for use with LPG.
3. Do protect every loading and unloading line. If it is not important enough to be protected, get rid of it.
4. Do remember that a pump which works both ways requires two by-pass valves, one on each side.

# INTERNAL VALVE TRIP ASSEMBLY

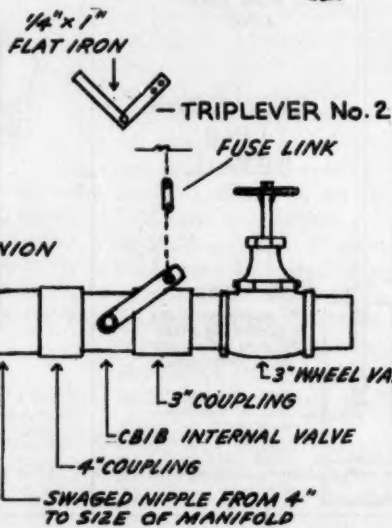
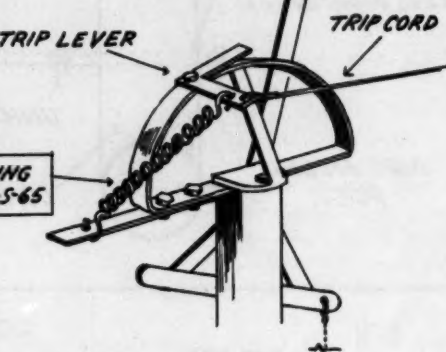
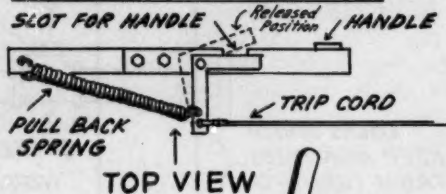
NOTE - Use only 3 in. pipe, placed 3 ft in the ground. Smaller pipe will jar loose with repeated use of the trip assembly. The slot in the quadrant (which holds the lever in place when the internal valve is open) should be cut after the pipe has been set in the ground and the linkage between the trip lever and the arm on the internal valve has been adjusted. Only then can the exact slot location be determined. The same applies to the lever stop bar welded to the quadrant. The only difference between types 1 and 2 is the method of tripping the handle.



## TYPE 1 (Cocked)



## TYPE 2 (Released)



5. Do remember that it is comparatively easy to build a good bulk plant with new equipment, but it takes very good planning to build a good one with whatever is at hand. Carefully think it all out in advance, working out the plan completely. ■

Fig. 7. An internal valve is an integral part of the loading-unloading station manifold. The trip assembly for this valve is mounted on a 3 in. post and a long cord is attached for remote tripping. The panel at the left shows how the post, trip handle, and quadrant are constructed. In the center panel one type of trip release is shown in cocked position in both three-quarter and top views, plus a close-up of the trip lever. The panel at right shows a second type of release in released position, again in top and three-quarter views. At the bottom of this panel, a close-up indicates how the trip assembly is connected to the internal valve. Both of these trip assemblies can be fabricated in the average bulk plant workshop and both should be tailored to the installation. For the location of the trip assembly in loading-unloading station set-up, see Fig. 6.



FEBRUARY 1959

BPN

## beyond the mains

THE ANSWER IS NO!

What steps do you take to hire—and keep—good salesmen? In the BPN-sponsored round-table meetings held during the past two years, and in individual conversations between the editors and industry leaders, this question recurred many times. One possible solution advanced was to sell electric, television, and other non-competitive items, but he would handle directly competitive items as well. Here are the alleged advantages:

1. It would bring into the store the buyer who had already had her mind made up on electric, and would give the salesman the opportunity to change her mind for her.
2. It would give the salesman the chance to make a competitive presentation, in which he could stress-geographically—the advantages of gas over electricity.
3. As a last resort, the dealer could sell the die-hard proponent of electric cooking, water heating and refrigeration the electric appliance, taking the sale away from a competitor.
4. But most important—here was the real crux—the salesman would have a greater variety of things to sell, his income would be increased, and he would be a more loyal and harder working employee.

The dealer may have reasons, but we would like to hear anyone who would actively promote this idea.

## This dealer said "YES!"



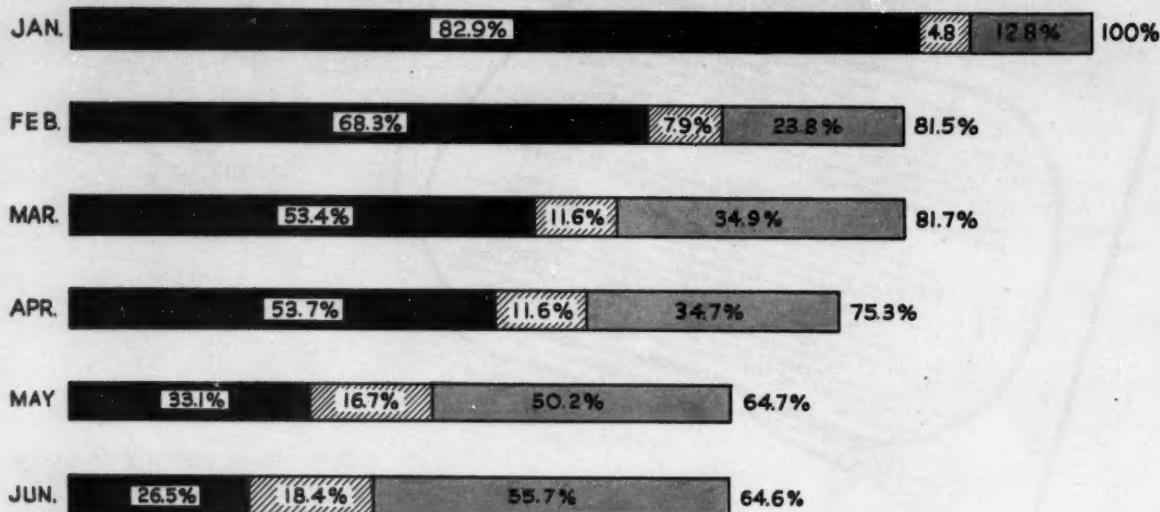
Should an LPG dealer sell electrical appliances?

At BPN-sponsored Sales Round Table meetings in 1957 and 1958, the dealers represented answered with a resounding "NO!" But at the last roundtable, held in Chicago last May, a leading dealer surprised all the other panelists by answering "Yes." H. R. "Buck" Pemberton, a quiet fireball from North Texas, told how selling electrical appliances was helping his company's gas business. That story begins on the opposite page. BPN, incidentally, takes no sides in the argument; but it does feel that dealers should approach the subject with an open and unprejudiced mind.

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# HOW ELECTRIC APPLIANCES BOOST ALLEN BUTANE'S MONTHLY GROSS

[January to June 1959—January sales used as base (100%)]



## SIX MONTHS PERCENTAGES OF TOTAL DOLLAR SALES VOLUME



■ GAS ■ GAS APPLIANCES ■ ELECTRICAL APPLIANCES

**A**RE your total dollar sales in June as high as 64.6 per cent of your January peak total?

If not, would you be willing to consider carrying a line of electrical appliances to accomplish this?

Allen Butane Gas Co., Denton, Texas, would—and did. After three years of selling kilowatt kontrap-tions, Allen has found that when gas fuel sales take their traditional summer dip, sales of both gas and electrical appliances can fill up more than 50 per cent of the valley.

Graphic proof of this is contained in the chart above. As dollar volume on gas sales slipped in June to a mere 20 per cent of the January figure, appliance sales rose 177 per cent, nearly tripling themselves. Percentage gains for gas appliance and electrical appliance sales were almost identical.

Allen Butane is deadly serious about promoting electric appliance sales in its five stores. Just how serious the company is can be

shown by a few statistics recently quoted by H. R. "Buck" Pemberton, vice president in charge of sales and personnel. Last year, the firm sold eight carloads of electric refrigerators and freezers and one carload of washing machines. Although it was the first year for such small appliances as mixers, toasters, percolators, fry pans, roasters, blenders, and razors, these items accounted for about \$50,000 (wholesale value) during the year!

As evidence of its market penetration, Allen Butane can point to a survey it recently conducted. During a nine-month period, it sold 33 per cent of all the freezers bought in its territories!

To accurately portray the current situation, the figures quoted in the accompanying chart do not date back beyond Jan. 1, 1959. For the six-month period covered, the company's gross sales were divided this way: gas, 55.8 per cent; electric appliances, 33.1 per cent; and gas appliances, 11.1 per cent.

Pemberton says Allen Butane had three reasons for wanting to invade the electric appliance field:

First, to balance the year-round work load for sales and service personnel. To Allen Butane, incidentally, a gas deliveryman is a salesman, so when he is not delivering gas he is selling appliances.

Second, to increase profits through added sales volume.

Third, to gain new appliance customers.

The biggest problem was to provide off-season work for a sales and service organization large enough to meet peak winter demands. Although the salesmen face an off-season slump each year, they can—through hard work—find enough new business to even out the peaks and valleys somewhat. Service people, however, have a harder time making their own work.

Adding electric appliances to the service load took care of the situation nicely. The winter-summer balance in service work is now

evenly distributed for the 13 service employees.

Servicing electric appliances has not made it necessary to increase personnel. However, the company does engage outside help on service troubles it is not able to handle.

This could have brought up another problem, that of the customer expecting free service, but a two-way sales-service aid eliminated that possibility. It's a service policy issued with each gas and electric appliance, adding Allen Butane's guarantee to that of the manufacturer. It covers defective materials and workmanship for one year, stating that both labor and materials will be provided free for one year. This indirectly emphasizes that any service not covered in the policy will be charged for at the usual rates. While this is primarily a protective device, the salesmen capitalize on it as an additional sales point.

Going into the electric appliance business has also proved a real boon to the sales force. One of the most important aspects of this is the increased income opportunities for salesmen. This means the company is able to pay high enough salaries and commissions to attract a top-notch sales force.

The spring and summer sales seasons, normally light for gas appliances, offer many opportunities for electric appliance sales. This is the peak season for refrigerated air conditioners, evaporative air coolers, fans, refrigerators, freezers, and portable radios. Allen Butane has made a policy of further emphasizing such electric appliances during the spring and summer.

While the resulting sales have not completely balanced summer sales with those of the peak winter months, they have helped tremendously to close the gap. As the accompanying chart shows, in May and June of this year, electric appliance sales more than equalled the combined totals of gas and gas appliances for those months. In other words, Allen Butane's gross for May and June, 1959, was more than twice what it would have been if it had not been handling electric appliances!

Pemberton feels that electric ap-



The broad variety of electrical appliances available makes them a large-volume sales item for Allen Butane, helps the company offset a summer low in fuel sales.

pliance selling offers many advantages to LPG dealers. The company's average gross profit on electric appliances is 30 per cent. The large price tag on major electric appliances means that such appliance sales boost the firm's profits considerably.

Along with the obvious profits earned from these sales, increased store traffic is another big advantage. Pemberton feels that customers attracted to an LPG dealer's store to shop for electric appliances become familiar with the store and are turned into good prospects for gas-using goods and gas.

"Customers like to be able to see and buy all types of appliances at a single location," he says. "Electric appliance sales are certainly going to be made by someone in our territory. We think we should have the additional profits that come from selling them. We also like to get as many people as possible in the habit of buying from us. It's a habit that builds our profits."

One might think that handling both types of appliances would result in an unhappy distributor or manufacturer now and then, but Pemberton says such is not the case.

"Where a manufacturer makes both gas and electric models, such as dryers, water heaters and ranges, we handle the gas models

only and try to show their advantages. This has never resulted in any difficulty with distributors or manufacturers."

Pemberton sees expanding future profits for the LPG dealer who adds electrical appliances to his line. He feels that the proper promotion of traffic-building electrical appliances will help other dealers increase their profits, just as Allen Butane has increased its profits.

He offers three bits of advice to the LPG dealer thinking about adding electric appliances to their merchandise line:

1. You must buy in large enough volume in order to buy at the right price.
2. You must advertise extensively.
3. You must service what you sell.

The future looks bright for Allen Butane too. Pemberton expects to continue expanding the electrical appliance lines.

"We expect to double our electric appliance sales during the next two years, Pemberton says. "In addition to the profits we will earn from these sales, we know that the traffic they create will boost sales and net profits of gas appliances and gas."



## Meet Ollie Ash—

### Mr. Diversification



**A**T last count, Ollie Ash had 1683 regular customers. Of these, 1653 were domestic. Thirty were industrial and commercial. Yet these 30 non-domestic customers were taking 40 per cent of Ash Propane & Butane Co.'s annual gallonage!

The 30 customers represent some of the best load diversification in the United States. Take a deep breath while we rattle them off:

Road graders, drive-in theaters, trucks, concrete mixers, salvage yards, tire recappers, city buses, motels, schools, churches, a minnow farm, irrigation pumps, brooders, fishing docks, tractors, camp trailers, a jet fuel plant, cabins, construction camps, steel cutting, sand pits, drilling rigs, a seed company . . .

And an entire town!

If that won't win Ollie Ash a prize for diversification, it will put him well up in the running. More important to Ash himself, it is giving him fast load growth (1959 started out 52 per cent over the previous year) and a summer-to-winter ratio that's near 50-50.

Skeptics might point out that Ollie Ash has the advantage of location. His headquarters are at Muskogee in northeastern Oklahoma, and Muskogee is in the process of growing right out of its

britches. The city limits sign shows a population of about 35,000, but the sign paint was hardly dry before that figure was obsolete. It's more like 75,000 today, according to Ash. Within a 40-mile radius are three new dams, with a fourth under construction. This has turned vast areas into water playgrounds. Tourist business is hopping. New industry is coming into town. Prosperity is in the air.

But it's unlikely that Muskogee has a great deal more to offer an LPG dealer in the way of markets than hundreds of other cities throughout the U. S. The big difference is that Ollie Ash knows how to accept the offer better than most.

Ever since he first got into the petroleum business, he's been an opportunist. But it took boldness and aggressiveness to turn opportunities into loads.

This attitude is well summed up by Ash's LPG manager, Wayne Rider. He says that Ash is "going after business . . . looking for all kinds of ways to put our product to use. It makes no difference where or when LPG is needed. We're ready to supply it."

Ash's first opportunity in the L. P. gas field came in 1955. For the previous 15 years he had been in the gasoline business, and had

built up to three stations. In February, 1953, he became a Phillips gasoline jobber with bulk facilities and wholesale outlets. But gasoline sales were heaviest in summer and he needed some winter business. So, it seemed a natural to accept the Philgas franchise when it was offered to him in 1955.

To get himself started, he bought out another dealer, but that operation had not been a very profitable one. In effect, as he says, he "started from scratch."

Now, of course, his LPG outlets are a full-time, year-round activity, although he has continued with his gasoline and oil business. But at first, price competition was rough and it took a while to get a foothold. Gas was selling at rock-bottom prices: 8 to 8½ cents in bulk and \$3.50 per cylinder. In the more than three years that have followed, price has become secondary to the development of new markets. Today Ash and his competitors are charging 11 cents in bulk (12 in winter) and \$3.75 per cylinder.

In mid-1959, Ash already had his eye on the 2 million gal. mark. The photos on the succeeding pages depict some of his major non-domestic loads, giving an indication of why BPN thinks he's a strong contender for the "Mr. Diversification" title.

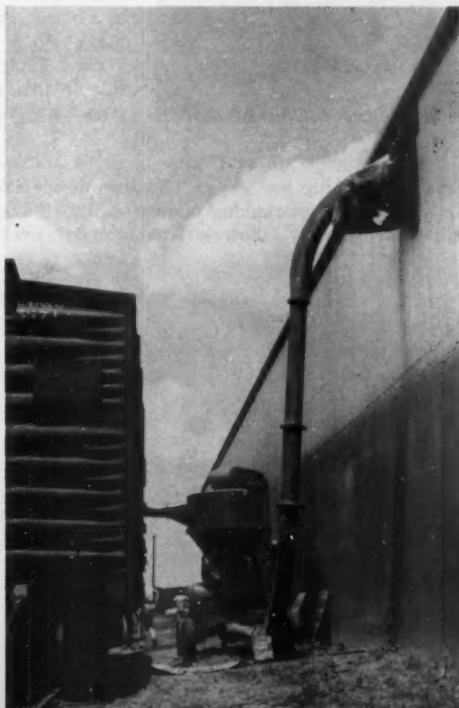


**Salvage yards.** Three salvage yards buy LPG from Ash for use in cutting up junked cars. Cost is one-fourth that of acetylene. Propane is supplied in 100-lb cylinders.



**Minnow ponds.** To stock lakes such as this one at Western Hills in Sequoyah State Park, minnow ponds are located nearby. LPG powers circulation pumps at the ponds. Ash Propane serves two of these, both from 500-gal. tanks. The usage is intermittent but heaviest through the summer.

**Grain elevator.** A new grain elevator in Muskogee uses LPG to power pumps which transfer grain from railroad cars to the granary or vice versa. Liquid is fed through a 200-ft line leading from a 500-gal. tank on the property. The tank must be filled daily. Usage is 20 gal. per hour, 16 hours per day, 2½ months to load, 2½ months to unload. Estimated total for the loading season is 16,640 gal.

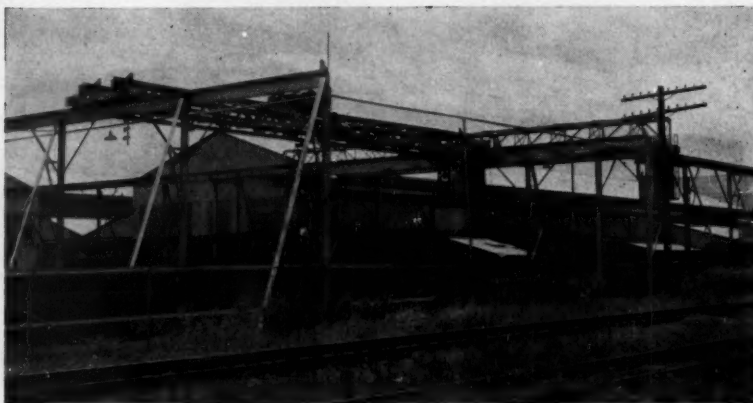


**Transient power loads** are one excellent market Ash has tapped. One of his gasoline service stations, located on busy Highway 69, has a NorTex Rocket dispensing unit. It serves propane to truckers for refrigeration units, to motorists for LPG-powered vehicles, and to other transient customers. He also sells at wholesale to five of his gasoline service station outlets, two in Muskogee and three in neighboring towns. The station at Wagoner is presently the leader, pumping 8000 gal. a month average the year around. This would give it an annual total approaching 100,000 gal., an amount equal to almost one-tenth of Ash's total gallonage for 1958!



**Ready-mix concrete trucks.** This fleet has 17 trucks, and both the truck engine and the mixer engine on each vehicle use LPG. Usage is year around, with a summer peak about 25 per cent higher than the winter average. Gas is distributed from a 1000-gal. tank on the concrete company's property. Average monthly usage is 7500 gal., totaling 90,000 gal. annually.

**Steel company.** John F. Beasley Construction Co., fabricator of gigantic bridges, out-sized cranes, and tanks, uses LPG for flame cutting and preheating of T-1 steel. Besides cost, LPG has the advantage of not being harmful to the steel, according to the Beasley foreman. Gas is stored in a 1500-gal. tank. Usage varies with the job, averages 200 gal. per day on some.



**Tire recapper.** At Wagoner, this tire recapping firm uses LPG for steam generation. Usage is heavier in summer than in winter because that's when tire sales are best. With a 500-gal. tank for storage, this plant uses 2000 gal. per month average the year around.

**Muskogee city bus lines.** A total of 15 buses serve the city and environs. These vehicles use an aggregate average of about 6500 gal. per month, and hit 9000 gal. dur-

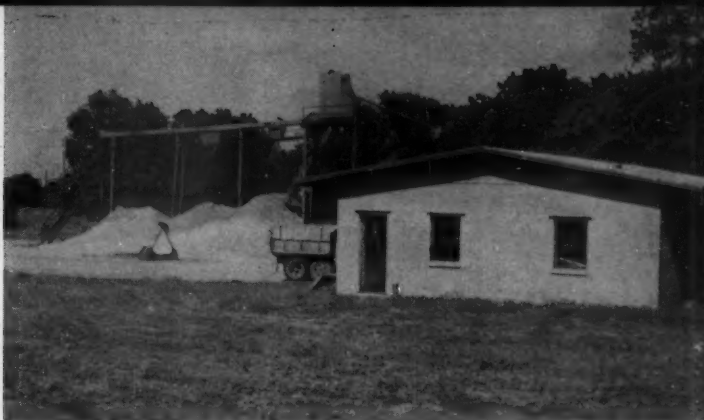
ing the winter. (Because of the cold weather, engines are kept running more steadily.) Storage facilities, 18,000-gal. tank (shown). Annual usage, over 100,000 gal.



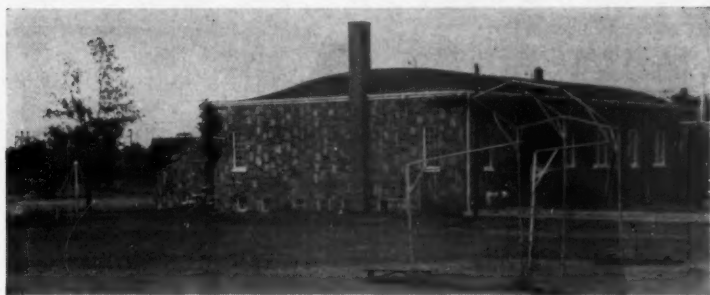




**Drive-in theatre.** LPG is used for cooking refreshments and heating the offices at this theatre near Muskogee. One 250-gal. tank supplies fuel at a rate of 300-400 gal. per month for a 10-month period. Annual usage is about 3500 gal.



**Sand Plant.** Johnson Sand Co. in Muskogee pumps sand out of the Arkansas River with LPG-powered equipment. Two Waukesha engines, one a converted model and the other factory-equipped with LPG, use a combined average of 2500 gal. per month the year around. Only one 500-gal. tank is used, but total annual usage is 30,000 gal.



**Schools.** Ash serves four schools during the nine months they are in session. The elementary school at Okay (shown) has one 500- and one 1000-gal. tank. It uses gas for heating reaching a peak of about 4000 gal. per month in the winter.

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Not pictured are several other sizable, unusual loads. They include:

**Oil Well Drilling** is an intermittent load. Usage is approximately 100 gal. per day per well.

**Trucking Company.** One small firm in Wagoner uses LPG for engine fuel. Out of a 500-gal. tank, it averages 1500 gal. per month the year around.

**Irrigation.** Ash supplies two alfalfa farms in the Arkansas River bottom area. Since using LPG-powered irrigation, they are getting two or three cuttings per year, as against a low of zero in one recent dry year. Another irrigation customer is a flower seed farm, where ten acres of flowers are watered.

**Non-piped Village.** Little Tullahassee once had natural gas, but the service was discontinued. Rather than trying to take over the piping system, Ash ignored it and began serving customers via tanks. The entire town, 25 customers, now buys from him. All use 250-gal. tanks.

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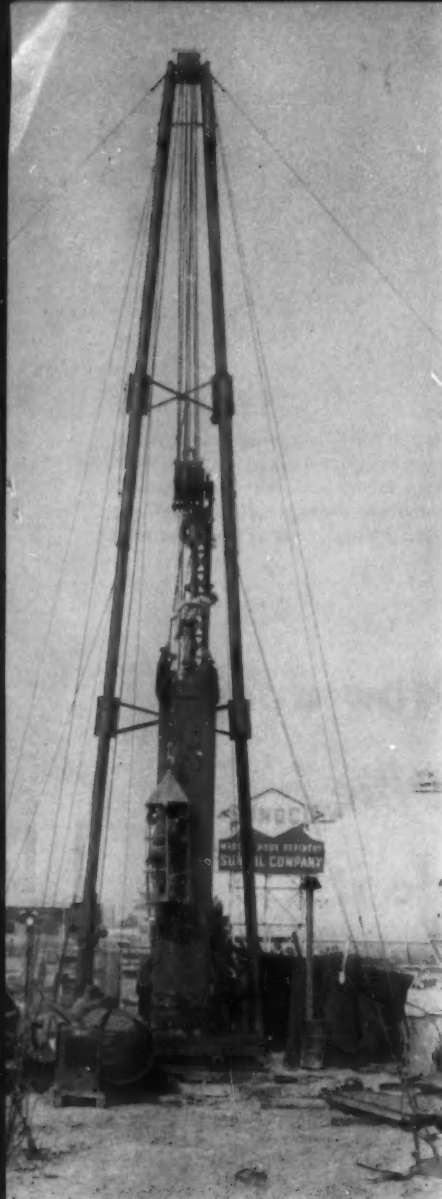
## How does Ollie do it?

**BY** keeping on top of the market at all times. Any time a new industry moves to town, or a new enterprise is announced in the newspapers, Ollie immediately begins figuring out ways to cash in on it. He works closely with the Chamber of Commerce and other groups.

Ollie uses budget billing and gives liberal credit wherever the risk warrants.

Ollie also rewards good sales work. Route men are given one-half-cent per gallon delivered, in addition to a regular salary. They are given no territorial protection, but can bring in new customers from anywhere in the Ash service area. These customers are theirs, and they continue to supply them as long as they remain Ash customers. Routes, therefore, overlap, but Ash sees to it that no two men are in the same area on the same day. He also uses sales contests, rewarding the drivers who score the greatest gallonage increases.

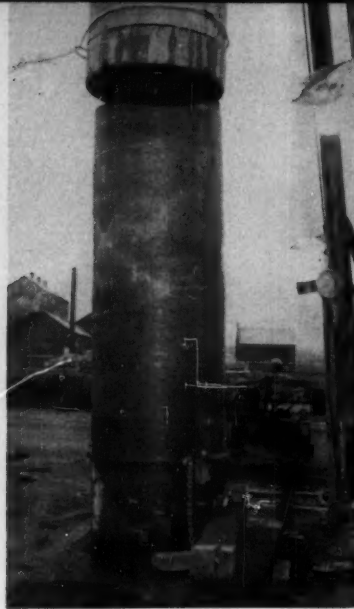
But perhaps most important of all is the Ash attitude of taking every bit of business he can lay his hands on. ■



This coring rig was used to sink the 4-ft-wide, 307-ft-long shaft needed to build the 10.5 million gal. cavern. Note size of man on top of cylinder.

**I**N all industries, one of the most important factors is the ability of the producer to cut overhead. One of the most effective cost-cutting methods at the disposal of the petroleum refinery is underground storage instead of above-ground tank farms.

Realizing this, the Sun Oil Co. in 1954 began investigating possibilities around its Marcus Hook (Pa.) refinery. After three years of site



Closeup of the coring rig shows a cylinder lifted from a rock core just removed from the shaft. Core is 4 ft in diameter, usually about 20 ft long.



After the shaft was completed, a typical hard rock mine rig was built over the opening. About 125,000 tons of granite passed out through this unit.

## Sun Oil cuts overhead with huge storage cavern

surveys, feasibility reports, and test borings, the firm decided to dig a cavern right under its refinery.

The Tulsa (Okla.) firm of Fenix & Scisson, a veteran in the underground storage cavern construction field, was retained. Plans called for a 10.5-million gal., 14-million cu ft cavern, the largest ever attempted by the firm and the largest ever built to store petroleum products.

Preliminary borings also indicated this would be the toughest digging job ever tackled by Fenix & Scisson. The cavern was to be

located over 300 ft below the surface; and all but 20 of those feet were solid granite, a very hard, tough, abrasive rock that wears out equipment five times faster than the usually encountered shale.

Because of these unusual conditions, a rather radical approach was needed. The standard method of getting down to the desired level is to drill a 4 in. hole, then bore it out with an 8 in. drill, a 16 in. drill, etc., until the desired shaft size is obtained.

Instead, Fenix & Scisson decided to use the coring method for the 48-in. diameter, 307-ft-long shaft. A 24-ft-long, 4-ft-wide, 1-in.-thick steel cylinder was inserted in a rig that twists it into the earth, like a cookie cutter going through dough.

**STARTUP REPORT**



A workman enters the cavern through the shaft opening. The 1.1-ton capacity bucket can carry four men, which meant 15 trips to transport the 60-man crew.



The rock was loosened with dynamite, 250 lb per round. Here, workers use an Atlas Copco drill to bore a dynamite-plant hole—at a 2 ft per minute clip.



The granite broke loose in such large chunks that secondary blasting was needed to break it up fine enough to fit in the bucket. Note miniature railroad.

After the cylinder bored 24 ft down, a small dynamite charge was set off to break the rock "core" loose at the bottom. The cylinder was then hoisted out, the core removed, and the process repeated.

When the shaft was completed, two men were sent down in a steel bucket and—with hand tools—started expanding the area at the bottom. As the space grew, so did the work crew until it reached its peak of 60 men. Hand tools gave way to heavy mining equipment, which was disassembled at the surface, sent down the shaft piece by piece, and reassembled 307 ft below.

Steel buckets of 1.1 ton capacity served a dual purpose, carrying four men at a time up and down the shaft and lifting out the granite. Fenix & Scisson estimated that it took 177,000 bucket loads to remove the 125,000 tons of excavated rock.

The rock was blasted loose with dynamite. It broke in such large pieces that secondary blasting was needed to smash the largest pieces so they would fit into the buckets. Approximately 100,000 lb of dynamite were used but seismographs at the surface recorded no blasting tremors.

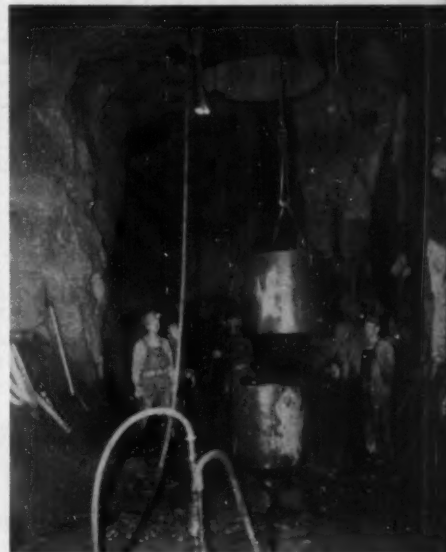
The cavern was constructed in a "room and pillar" pattern. The 14 million cu ft of rock were removed in such a way as to form six 40-ft-diameter pillars with a maximum of 35 ft of space between them. The

cavern is 37 ft high and covers about one acre. The strength of the granite pillars made it possible to excavate about 60 to 65 per cent of the volume instead of the usual limit of 35 to 40 per cent for softer rock.

On Jan. 7, 1959, after two years of excavating, the first butane was pumped into the cavern through an 8-in. fill line. It is pumped out as needed by two 60 hp pumps, each rated at 70 gal. per minute.

Sun Oil officials estimate the underground cavern enables them to store butane and/or propane at a cost of from \$5 to \$7 per bbl, as compared to aboveground storage figures of \$15 to \$20 per bbl for butane and \$40 to \$50 for propane. It's no wonder, then, that Sun Oil is anxiously awaiting the completion of two additional caverns, expected to be ready late next year. ■

This partial view shows the nearly completed cavern. Note bulldozer, one of three dismantled on the surface, sent down in pieces, and reassembled at the bottom. Upon completion, Fenix & Scisson laid down red carpets, served dinner to 160 guests to celebrate.



Up goes another bucket of granite. Approximately 177,000 bucket-loads were required to haul up the 14-million cu ft of granite that was removed.

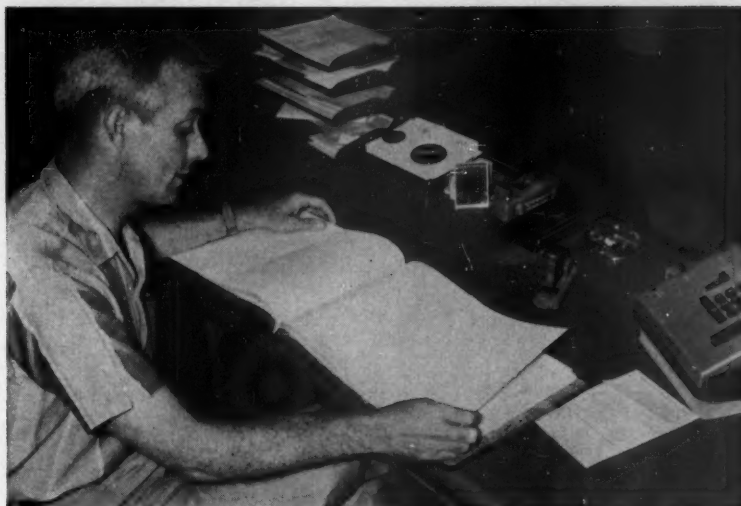




AREA

AREA	NO.	CUSTOMER'S	ADDRESS	TANK TYPE	MAX. WIDE INCH	VOL.	CR.	JAN.	FEB.	MAR.	APRIL	MAY	JUNE	JULY	AUG.	SEPT.	OCT.	NOV.	DEC.
<h1>Routing system controls credit, too!</h1>																			
<p>WILLIAM W. CLARK • EDITOR</p> <p><i>With 2500 customers, Reliance Gas Co. is on the brink of becoming a large dealership. Owner Tom Sharpe has developed a routing system that reflects his philosophy: "Build new loads during the hours other businesses would spend collecting from slow-paying customers."</i></p>																			

This blank sheet from Tom Sharpe's ledger book represents one day's potential deliveries for one route.



Tom Sharpe looks over the ledger book made up from pages such as the one shown opposite. Pages measure 11 x 17 in.

**A**N improved route scheduling system has given Tom Sharpe of Athens, Texas, a tighter grip on problem credit. And with 2500 customers, his Reliance Gas Co. in Athens and nearby Kaufman has 2500 potential credit problems.

But Sharpe's business is efficient-ly run. He believes that delivery scheduling should be a means of controlling credit. Accordingly, over the past two years he has been developing a system. It's still not perfect, he says, but it has a built-in, automatic credit "stopper."

The system was an outgrowth of earlier efforts to devise a simple, foolproof set-up for increasing per-mile deliveries and decreasing out-of-gas calls. Reliance had had radio for several years, and that helped. But radio alone, Sharpe found, is not enough. You must have a good, basic delivery plan to make it work best.

He tried driver route books and office route books, but was not satisfied. He tried making up each day's schedules from individual ledger records on each customer, but this was clumsy, time consuming, and not a very good guarantee against out-of-gas situations. Outages were more frequent than they should have been, and there was some unwanted duplication of effort.

The system that was finally devised is simple, but lots of work went into planning and setting it

up. First, Sharpe made a complete credit and usage study covering a three-year period. Each customer's average usage was charted to establish the most efficiency delivery interval—with an ample margin of safety. At the same time, optimum volume per delivery was found. Then the customer's credit history was checked, and he was graded as to promptness of payment and reliability.

All this information was used as a basis for setting up a customer ledger book, subdivided by routes.

There are today six routes delivering to about 2500 customers, or an average of approximately 415 accounts per route. Each route has been further subdivided into daily routes, set up on a one-month cycle. This means that every customer on every route will always receive gas on the same day of the month, whether the delivery is monthly, bi-monthly, or less frequently.

Each sheet in the ledger book represents one day's potential deliveries for one route. Having segregated customers by routes and delivery days, Sharpe entered on the appropriate sheet the custom-

er's name and address, the tank size and type, his maximum service needs, probable volume per delivery, and credit rating (coded).

There is space on the ledger sheet for about 44 names, which are listed in geographical order in the left-hand column. The specifications listed above are entered in succeeding columns. The remainder of the sheet is devoted to a running record of usage, month by month, over a 48-month (4-year) period.

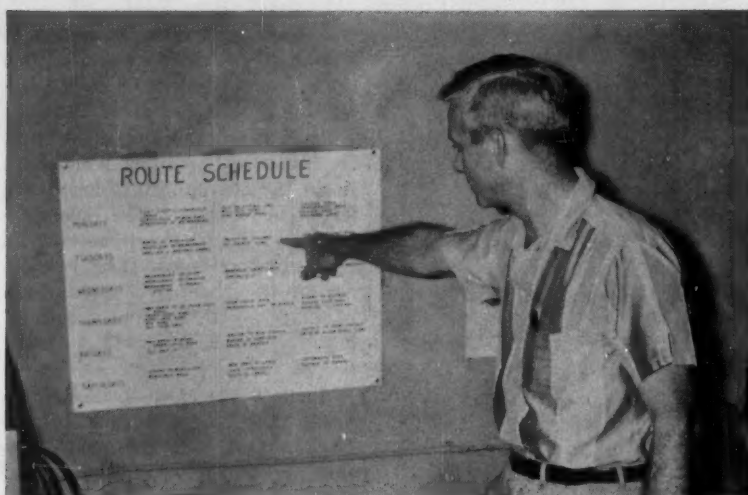
Each of the calendar months is listed in order, and each is subdivided into four columns representing corresponding months over the four-year period. Gallons delivered in any one month are entered in the appropriate column. By grouping the four corresponding calendar months together, Sharpe is able to see at a glance the seasonal usage for a customer. This gives a year-around pattern as well, and is a good indicator of trends in individual consumption. From this portion of the record, volume and maximum service needs may be adjusted as required.

Each ledger sheet serves as a guide to scheduling a day's run for a route. On the day previous, the office sales manager makes up a "Fuel Driver Schedule" for each driver. This is dated and the area identified. On this form are 20 spaces for customers' name and address to be inserted, together with tank size and type and "remarks."

Selection of stops in the day's routes, then, is made by Sales Managers Charlie Tinbey (Athens) and Otto Blain (Kaufman) under Sharpe's supervision. It's done scientifically, on the basis of usage. It's also tied in directly with credit. If a slow-pay account is to be put on a cash basis, an entry in the "remarks" column directs the driver to collect for the sale. If an account becomes dangerously overdue, the customer's name is omitted from the schedule.

Presently, accounts are coded as to credit in three ways. An "A" account is a prompt paying customer, who will always pay up within 30 days. A "B" account is one that falls into what Sharpe calls the "vast middle ground" of dependable, but slow-pay, custom-

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**BP**



Sharpe points to the Tuesday routes of one of his drivers, using his wall-mounted Route Schedule. Vertical columns represent drivers, horizontal columns are days of the week.

ers. "C" class includes accounts that must be put on a cash basis for any deliveries made when they have a charge outstanding.

What happens, then, with a "C" account who is left off the schedule because of an outstanding charge?

"We wait until he pays us or calls for gas," says Sharpe.

Obviously, this cuts down on the efficiency of the system. What about that?

"Efficiency of delivery scheduling is less important than good credit control," Sharpe replies. "We would rather make some extra trips than 'efficiently' build up a flock of bad debts."

In fact, Sharpe believes that servicing gas to poor-pay customers may be a money-losing proposition. He has recently been making studies of accounts receivable and delivery records with an eye to kissing some of his marginal accounts goodbye.

"Let the other dealers fight over them if they want to," he says with a shrug.

A little reflection shows that there's a lot of wisdom in this attitude. With the system he now has, he was able to eliminate one route by making delivery schedules more nearly automatic. Each day's route is planned for the highest possible number of deliveries and the highest possible gallonage consistent with customer usage. Since he is satisfied that all customers on the schedule have their credit in order,

Sharpe has no worries about whether his drivers are extending service to customers who must be watched.

Furthermore, regular route customers have come to expect a delivery on a given day. This makes it easier to collect for the delivery. In fact, today many tanks are filled when the customer is not at home.

They expect this sort of treatment, and Sharpe knows he will get paid for the gas. He couldn't have that sort of efficiency if he was including marginal customers on the regular routes.

So the lack of efficiency in the one phase is more than offset by increased efficiency in the other. By segregating the poorer credit risks, he can now make a study of the costs of delivering them. If he finds it's uneconomic, he can suggest that they go elsewhere for their gas.

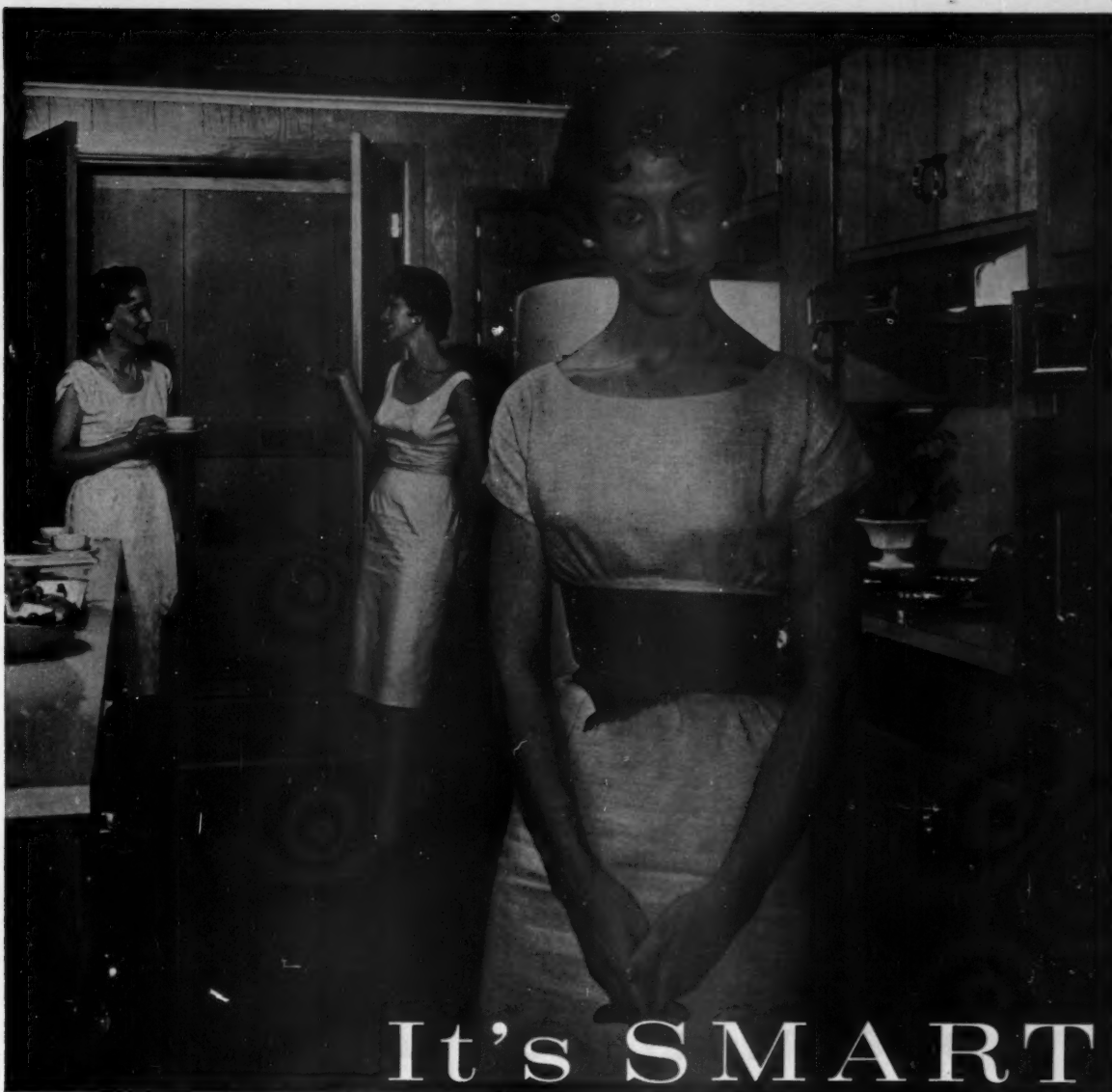
Outages among regular route customers have been reduced to a vanishing point. Sales have increased 10 per cent, new customers being attracted by the regularity and dependability of the service. So if he loses some customers, he gains others. More important, the more problem customers he loses, the more time he and his crew have to go out and develop new types of loads. This he is doing.

"When there are potential customers who could be assets to the business," Sharpe reasons, "why spend your time selling to the ones who will give you nothing but problems?"

FUEL DRIVER SCHEDULE			
Driver _____			
Date _____			
Area _____			
CUSTOMER'S NAME	Address	Tank Size & Type	Remarks
1. _____	_____	_____	_____
2. _____	_____	_____	_____
3. _____	_____	_____	_____
4. _____	_____	_____	_____
5. _____	_____	_____	_____
6. _____	_____	_____	_____
7. _____	_____	_____	_____
8. _____	_____	_____	_____
9. _____	_____	_____	_____
10. _____	_____	_____	_____
11. _____	_____	_____	_____
12. _____	_____	_____	_____
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14. _____	_____	_____	_____
15. _____	_____	_____	_____
16. _____	_____	_____	_____
17. _____	_____	_____	_____
18. _____	_____	_____	_____
19. _____	_____	_____	_____
20. _____	_____	_____	_____

Each driver gets a new Fuel Driver Schedule each morning. This 8 1/2 x 11 in. mimeographed form has been filled out the previous day by one of the two Reliance Gas sales managers. Credit and collecting information is placed in the "Remarks" column at that time.





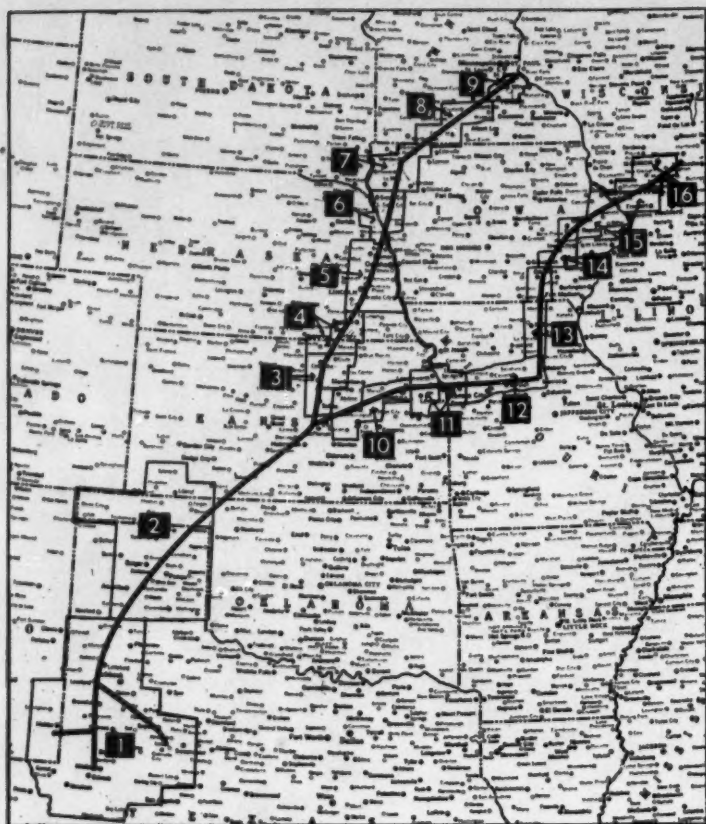
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Shannon Bldg., Little Rock, Arkansas



## PIPELINE RATES

To	From Zone No.	Loading Charge	Carrying Charge
Reno and McPherson counties	1	\$0.10	\$0.40
	2	0.10	0.25
From	To Zone No.		
	3	0.10 <sup>1</sup>	0.10
	4		0.18
	5		0.25
	6		0.30
	7		0.33
	8		0.40
	9		0.45
	10	0.10 <sup>1</sup>	0.10
	11		0.15
	12		0.25
	13		0.35
	14		0.40
	15		0.45
	16		0.50

<sup>1</sup> Not applicable to product originally shipped from Zones 1 or 2.

Note: Rates for deliveries from points south of Hutchinson and McPherson, Kan. shall be added to the rates to delivery points north of Hutchinson and McPherson, Kan. in order to determine total rates.

# Katy railroad's plans jell for pipeline service in Midwest

THE wheels of the plan to pipe LPG along "Katy" railroad rights of way from Texas to Iowa, Illinois, Minnesota, and Wisconsin are grinding slowly toward a fall-of-1960 completion date, according to the project's spokesmen.

Originally targeted for this month, the job has had to crawl through the usual mire of organizational red tape. Financing and throughput agreements have posed problems that have not only caused delays, but have also brought about a lopping off of the most ambitious part of the original plan—the transport of products along the New York Central's right of way as far as Albany, N. Y.

The net result will still be a

break for dealers in the North Central states. They'll get reduced transportation and storage costs, along with steadier field prices and more dependable supply.

Originally known as Katy-Central Pipe Line, the carrier is now officially "Midcontinent Eastern Pipeline." The company which bears this name is affiliated with Katy.

Although, at this writing, not all throughput agreements were in hand, it appeared that maximum deliverability will be about 30,000 barrels per day or more. As initially planned, the line will cost about \$55 million, it is estimated.

Service will originate in Texas and in Lea county in eastern New

Mexico. The first leg of the journey will carry to Reno and McPherson counties in central Kansas (see map). From here, product will be distributed to other Kansas areas and, through two northern legs, on to Nebraska, Iowa, Minnesota, Missouri, Illinois, and Wisconsin.

For tariff purposes, receiving and dispensing points have been lumped into 16 zones. Zones 1 and 2 embrace the points of origin in Texas, New Mexico, and parts of Kansas. In Zone 1, a loading charge of 10 cents per 42-gal. barrel (at 60 deg. F) is applied, plus a 40-cent carrying charge for transport as far as Reno and McPherson counties. In Zone 2, the

# Now MASTER TANKS are filled FASTER



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equipment now  
used on propane  
delivery  
trucks

Now, all domestic tanks produced by Master Tank & Welding, Dallas, Texas, and Quincy, Illinois, will feature a new Multi-Valve® with a separate fill valve. This allows a much faster filling rate than any current Multi-Valve®.

This system utilizes splash filling, which creates a refrigerated condition and reduces the vapor pressure. Then tank can be filled without using a vapor return hose. Also, the direct flow on the separate fill valve cuts friction to a minimum

and reduces the strain on the truck pump. Rego engineers, in conjunction with Master engineers, have designed this new Multi-Valve® for the exclusive use of Master Tank & Welding. It cuts the time of each delivery stop and increases the number of calls each truck can make in a day. All this adds up to greater PROFITS. Another improvement has been to add a check lock to the bottom of the tank for liquid withdrawal.



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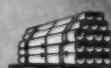
FILLING STATIONS



FARM CARTS



REFINERY



LINE PIPE



loading charge remains at 10 cents (as it does in all zones where it applies) but the carrying charge is reduced to 25 cents.

North of Reno and McPherson, additional tariffs have been established. Carrying charges for the trip on northward vary from 10 cents a barrel in Zone 3 (certain Kansas and Nebraska counties) to 45 and 50 cents at the northernmost points in the market (see tariff schedule).

The arrangement of the facilities provides a two-stage transportation system. Product may be placed in the line in the southernmost zones for transport only as far as Reno-McPherson, or it may be carried all the way to the northernmost zones. Similarly, product may be injected at Reno and McPherson counties for transport on northward.

Deliveries will be made at six terminals—Lincoln, Neb.; St. Paul, Minn.; Sheldon, Iowa; Kansas City, Mo.; Ottumwa, Iowa; and Jefferson Junction, Wis. At present, the company is proposing that delivery at these terminals be restricted to tank cars and to tank trucks of capacities of 5000 gal. or more. This rules out bobtail loadings.

Butane and natural gasoline will be carried only as far north as the Kansas terminal. Only propane will be carried in the northern legs. One reason for this is the availability of relatively cheap (\$2 per bbl.) storage capacity at McPherson. At present there is no such storage available north of that point.

The line will be constructed of X42 seamless or electric weld pipe, with wall thicknesses varying from .188 to .250 in. It will be of 8-in. diameter as far north as Pampa, Texas; 10-in. from Pampa to McPherson; 8-in. from McPherson to Lincoln, Neb., and Moberly, Mo.; and 6-in. from there on north.

Discharge pressure on the pumps will be 1200 psi, dropping to 200 psi suction pressure.

In small-diameter pipes, according to a company spokesman, interfacial mixing of product is nominal. No problem is anticipated, particularly since the minimum tenders of natural gasoline and butane will be 25,000 bbls. However, if mixing should become seri-

ous, mechanical separators will be used between slugs of different products.

Propane, incidentally, will be accepted in 10,000-bbl. tenders.

Freight savings will range from moderate to excellent. Close to the route of the pipeline, it is expected they will be shaved by about 1¾ to 2 cents per gal. These savings will be reduced, however, by the extra cost for lateral movement away from the pipeline, whether by railroad tank car or by truck.

Midcontinent cites as an example the present freight rates from Pampa, Texas, to Minneapolis, which run \$1.68 per bbl. based upon the standard railroad rate of 4.7 lb. of LPG per gal. The pipeline tariff will be 80 cents per barrel for the same trip. However, to move the product out to a bulk plant 100 lateral miles away by common carrier tank truck will cost about 48 cents per barrel, and the pipeline expects to charge 8 cents for loading the tank car or truck. Therefore, the total cost to the bulk plant would be increased to \$1.36, and the saving would be decreased to 32 cents.

On the other hand, if the truck movement were in the direction of the pipeline, the present combined rail-and-truck cost would be higher than \$1.68, so the savings made possible with the pipeline would again increase. Conversely, if the secondary carrier had to backtrack along the route of the line, they would be decreased to even less than 32 cents.

The overall price picture may also be helped by the company's storage proposals. At present, salt storage is available in Midland-Odessa in West Texas and in the Texas Panhandle as well as at the McPherson terminal. However, no additional storage is contemplated except for the company's "own convenience." The company has no salt storage available north of McPherson. This is one reason why butane and natural gasoline will be carried no further north, for when you start batching product, storage becomes essential. Only propane, then, will be carried northward.

Salt storage at McPherson can be had for \$2 per barrel. Recovered over a 20-year period, this re-

duces to 10 cents per barrel per year for one turnover, or .25 cents per gal. To this should be added about .01 cents for dehydration costs.

Rock storage, the company says, costs about \$5 per barrel, or nearly .75 cents per gal. for one turnover. Steel storage costs 3 cents on the same turnover.

However, the company contends that the dealer will be able to reduce his own bulk plant storage by having a pipeline to "back him up." If his steel storage costs him 3 cents on a single turnover, a dozen turnovers will cut this overhead to about a third of a cent.

The company will actively "encourage" rock storage north of McPherson by customer companies. A capacity of, say, 200,000 bbls. would change the winter-summer ratio from 4 to 1 to 2 to 1, which would obviously benefit everyone.

The construction of the line puts M-K-T in the position of competing with itself. However, it is losing some of the long-haul business anyway; and the pipeline is expected to increase its short-haul activity measurably.

Having a railroad right of way in which to lay its pipe has four advantages for the railroad. First, the ROW is there and paid for. Secondly, it already has the all-important communications network. Third, it has bridges, where usable. Fourth, it hauls its own pipe to stockpiles, saving on freight.

But, the company is quick to point out, railroad ROW's are not necessarily *ideal* for pipeline laying. Poles get in the way. Railroads must run through cities, where restrictions bar pressure piping. And small leaks might interrupt traffic. However, leaks do tend to be self-sealing, as they freeze the adjacent ground.

What, then, is the situation with New York Central? In spite of protestations that "we were unable to get the agreements necessary for financing," the big eastern carrier should not be completely counted out. It is still possible that the Midcontinent system might one day be extended to provide a tie-in with New York Central, and product may be shipped to Albany as originally planned. ■

# EAST, WEST, NORTH OR SOUTH— THE STORY'S ALWAYS THE SAME

## Summer business increased 150% through carburetion

St. Louis has a torrid summer and LP-Gas consumption for heating drops to nil. Community Propane, as a result, was faced with a tough summer load problem.

Edward K. Love, Jr., President and Clark W. Ayres, Manager of Community turned to Cities Service LP-Gas Representative Perry Voss for assistance. They decided an ideal summer market would be the innumerable forklift trucks in the surrounding manufacturing plants. An aggressive sales program directed at equipment distributors and the actual consumers resulted in a 150% boost in summer business in just two years.



Community Propane Gas Co.  
St. Louis, Mo.

A converted forklift at one of Community's large industrial accounts, Moloney Electric Company, gets checked by Clark Ayres and Edward Bakameyer of Community and Perry Voss, Cities Service LP-Gas Representative.



Chuck Brannon (r.) works with two employees at a special device they have constructed for winter rush time. As orders come in, three men can work over files on revolving table and process accounts.

## "We know we can depend on Cities Service"

Tex and Chuck Butane Co. has been in business for 13 years, the past seven with Cities Service. Most of their accounts are domestic but in recent years they have done extensive carburetion work in the construction field.

Charles Brannon, President of Tex and Chuck Butane Co. states, "When the winter rush starts, we know we can depend on Cities Service. I don't know of another company as fair about winter ratios. I'm sure we're not one of their largest distributors, but we have found through the years that the smaller distributor gets the same dependable service as the largest."



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20 N. Wacker Drive  
Chicago 6, Illinois

701 Sherland Building  
South Bend 1, Indiana

500 Robert Street  
St. Paul 1, Minnesota

3101 Euclid Ave.  
Cleveland 15, Ohio

7730 Carondelet Ave.  
Clayton 5, Missouri

170 University Ave.  
Toronto 1, Canada

1658 East Euclid  
Des Moines 13, Iowa

626 E. Wisconsin Ave.  
Milwaukee 2, Wisconsin





Charles Baker, customer service foreman (center) checks over plans for a forthcoming training session with two of his top instructors—Verne Winters (left) and Steve Miladinovich. In the background are some of the working props used in the training course.

## Pennsylvania servicemen's training school— a real example of gas unity at work

**I**N many areas of the country, the cause of gas unity has stumbled and pitched headlong into the quicksands of conflicting interests. But in central Pennsylvania, the L. P. gas dealers and the local utility company have found a solid, common meeting ground—servicemen's training.

It happened in Harrisburg, the state capital, which is served by a division of The United Gas Improvement Co. UGI is ringed by LPG dealers, both large and small. All have a common problem: How to do a better job of servicing the customers' appliances.

Until last year, servicemen's training had been a haphazard affair with uneven results. Dealers who are franchised members of certain chains have access to company-wide training programs. But this usually entails the expense of sending the trainee somewhere for instruction, which is costly. Further, many dealers have no such opportunity.

In any case, there has always been a certain reluctance to put forth the money and man-hours to train an employee who might be here today, gone tomorrow.

Manufacturers helped to fill this void with their own traveling service training courses, but they couldn't do the whole job alone. If ABC Controls Co. put on a school, too frequently a serviceman's employer would be handling XYZ controls. The time spent learning about ABC's would be largely wasted. XYZ might not have a training course, or it might not be presented in the area at the time it was most badly needed.

The Pennsylvania LPGA was disturbed over the situation. What could it do, as an association, to correct the situation?

Secretary Moylan Brown decided to approach the Harrisburg Division of UGI. The utility, he knew, had only recently overhauled its training program for its own servicemen. It had qualified instructors, and it could cover the entire subject. Now, if UGI would be willing to allow one or two local LPG service managers to sit in on the classes, these LPG men could in turn become instructors themselves and teach other LPG servicemen.

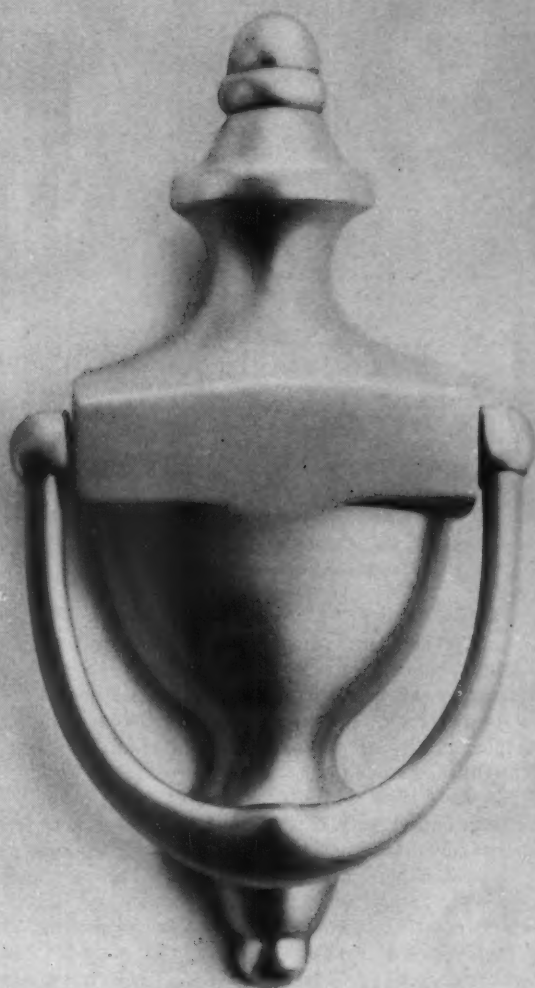
"Would UGI be willing?" Brown asked W. R. Bollendorf, local operating manager of United Gas Improvement.

Bollendorf had a better idea. Why, he asked, shouldn't UGI set up its own special classes specifically planned for the LPG men? They could be given free of charge to any qualified man a dealer wished to enroll.

This was too good to be true. It meant that dealers' men would now be able to get the same expert

**FIELD REPORT**





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PER DAY!**

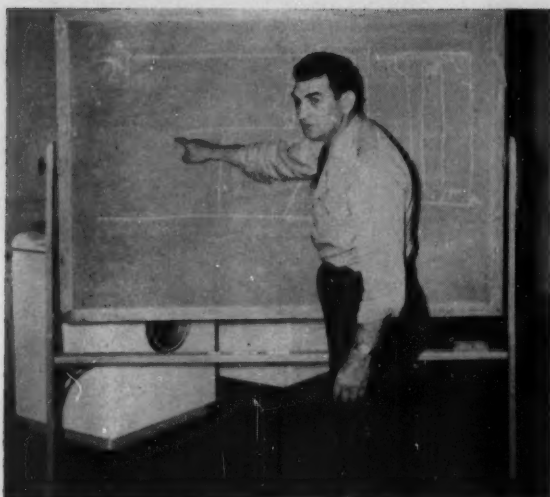
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At the blackboard, Steve Miladinovich explains a typical wiring diagram to a class of LPG servicemen.



A complete indoctrination is also given on gas appliances. Here Verne Winters points out features of a range.

training as the utility men, with the utility bearing the cost and providing the same instructors who train its own men. These instructors, incidentally, are particularly well qualified because they spend much of their time in the field in a working, supervisory capacity.

For its own training program, UGI had established nine separate courses. Six are on servicing and cover: circulating water heaters and incinerators, ranges, water heaters, refrigerators, househeating of all types, and clothes dryers. The other three are on: meter and house regulator installations, appliance installations, and the use of forms. Four of these courses, those on ranges, water heaters, househeating, and refrigerators, could be directly adapted for LPG service training. Only the instruction on burner settings would be different. The other courses did not apply sufficiently.

It was decided to limit enrollment to six men to assure maximum personal attention.

The courses were set up under the direct supervision of Charles Baker, UGI customer service foreman. The four instructors are all assistant foremen, who spend most of their time in the field as operating supervisors.

Scheduling is handled jointly by Brown and Baker. At the beginning of each week, they get together to plan the course for the

following week. One session is given on each subject. All LPG classes are in the afternoon, so as not to conflict with the morning classes UGI conducts for its own men.

When UGI intensified its own training activity in 1957, a completely equipped classroom was set up. Every popular type of appliance is represented and all models are operating. These same facilities are used for the LPG classes.

How important is this program in the cause of gas unity?

Both Moylan Brown and Russell W. Uhler, sales manager of the Harrisburg Division, believe it is the best way for the two industries to express their unity. Says Uhler:

"We had been wanting to work closely with the dealers for joint advancement of both segments of the gas industry. So when the idea of an LPG servicemen's training school was suggested, we were glad to do whatever we could to help out. It has already helped to build better understanding between the utility and the dealer. The end result—better servicing of gas appliances—will help us all. The customer will be more friendly toward gas—whether on the mains or off—if she gets prompt, efficient service."

Brown agrees wholeheartedly:

"The better understanding which this joint effort has built up between the utility and dealers is

even more important than dollars-and-cents advantages. And it means a great deal to the customer as well. When a gas serviceman answers a service call, Mrs. Jones does not consciously think of him as a utility man or an LPG man—he is simply a gas man. Therefore, those who do service work should mutually complement each other."

UGI, it might be added, has a direct stake in the success of the program. Like all utilities, it is extending its mains as the peripheral population grows, gradually absorbing some loads from various dealers. A poor history of gas servicing in these areas would place the company at a serious disadvantage.

Where is the program going from here? Theoretically, all eligible servicemen in the area will eventually complete the course. But it needn't end there. Refreshers are needed frequently. Even top-rated UGI servicemen participate in such re-runs. UGI makes a point of having every man go through the course at least once a year. The same thing might be done with the LPG courses—if everyone wants it that way.

And it looks as if they might. Says Brown: "It took a bit of educating to get the project off the ground. But now the participating companies have come to realize the value of this effort and are actually planning ahead for it." ■

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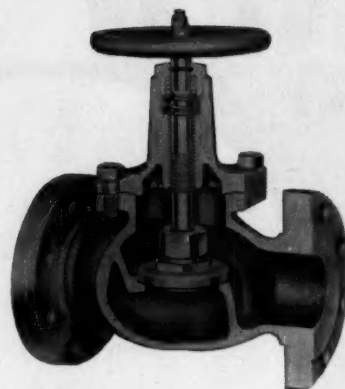




## The story on ductile iron



The two valves shown above were both subjected to the same number of hammer blows. One, made of cast iron, shattered. The other, made of ductile iron, distorted but would not break. Ductile iron valves (such as the one at the right) are now being produced for the LPG industry. This story of the wonder material was written by Marvin Martin, of The Bastian-Blessing Co., manufacturers of ductile iron LPG valves.



**A**T a recent L. P. gas convention, a 1-in. globe valve was intermittently beaten with a hammer and squeezed in a vise by conventioners for 4 days but it did not crack or shatter. This was not a steel valve. It was made of that remarkable material, ductile iron.

Ductile iron, unlike common gray iron, has the ability to twist and

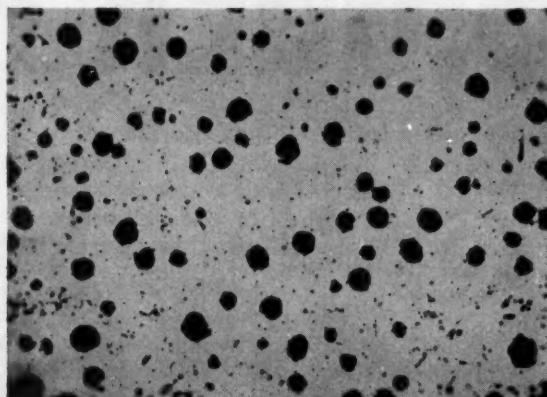
distort under tremendous pressure or impact. In this respect, it is similar to carbon steel. Yet, ductile iron retains the excellent casting and machining characteristics of cast iron. Thus, ductile iron is the long-sought solution for a way to turn brittle-gray iron into a strong, tough material. As such, it has been proclaimed "one of the

most significant metallurgical developments in well over a century."

Ductile iron was first marketed in 1948. It has a phenomenal growth record that reached 230,000 net tons in 1957. This is testimony to the materials' acceptance by American industry. It is constantly finding new applications where only steel was suitable before.



This micrographic study of cast iron shows its flake-like formation of graphite. This results in brittleness and poor resistance to thermal shock.



This micrographic study of ductile iron shows the modular or spheroidal graphite formation that is responsible for ductile iron's toughness.



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Use of LP-Gas is increasing rapidly, but Texaco Distributors are assured of dependable supplies *all the time*. That's because Texaco is one of the largest producers, and has a new fleet of tank cars for fast delivery.

Here's proof that teaming up with Texaco means a solid future: 683 distributors of Texaco products have been on the Texaco team for twenty years or more—many others for as

long as forty-five years.

### 5 reasons why it pays to be a Texaco LP-Gas Distributor

1. A product of highest quality—moisture-free.
2. Dependable and efficient delivery, in a new fleet of tank cars, from 25 strategically located production areas.
3. Immediate acceptance. Texaco LP-Gas is sold under the nationally-known,

famous trade-mark, the Texaco red star with the green "T".

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**Team your name** with Texaco and profit. Some areas are still open for a sound and profitable business with Texaco LP-Gas. Let us tell you how. Call or write today... Texaco Inc., LPG Sales Division, P. O. Box 2420, Philtower Bldg., Tulsa, Okla., Diamond 3-4101; 3350 Wilshire Blvd., Los Angeles 5, Cal., DUnkirk 5-0515.



## Ductile iron features pressure tightness; thermal shock resistance; and corrosion resistance

Ductile iron was introduced to the LPG industry in the form of globe and angle valves. The innovator, The Bastian-Blessing Co., manufactured the valve that took the beating mentioned previously.

True ductile iron must be distinguished from so-called ductile irons. Some so-called ductile iron products now on the market are produced to poorly conceived specifications with little or no quality control. Buyers should not be surprised if such products prove to be little or no better than ordinary

graphite formation in ordinary gray cast iron takes the shape of long flakes that break up the continuity of the metal matrix. This makes gray cast iron weak and brittle. Graphite in ductile iron takes on a spheroidal shape which allows a greater continuous surface of metal. This makes ductile iron hard and tough, giving it the ability to twist, bend and distort under the severest blows and shocks.

Ductile iron is the first high carbon ferrous metal to be officially approved by the Navy for ship-

and connecting steel bolts were sheared off by the resulting tremendous thermal shock, no damage to the valve could be detected. Ductile iron's heat-resistant ability is apparent from its utilization in many foundries where it has taken over many furnace applications formerly restricted to steel. Resistance to cold was demonstrated by the Navy. Ductile iron fittings on Navy polar sleds have carried 20-ton loads in minus 70-deg. temperatures.

Ductile iron has been used under highly corrosive salt sea atmospheric conditions. It has exceeded steel and equaled gray cast iron in its ability to resist corrosion from sea water and sour-crude petroleum.

Still in its infancy, ductile iron has unlimited growth possibilities. It can solve many tough assignments formerly limited to steel. It can also replace gray-iron castings with greater strength and ductility. The major problem to be faced by foundries and manufacturers is in refining the production process and maintaining strict quality control. But, many companies, including Bastian-Blessing, feel this extra effort is well rewarded with products made of an iron that is truly ductile. ■

### Comparative Strengths of Cast Iron, Ductile Iron, and Cast Steel

	Cast Iron	Ductile Iron	Cast Steel
Tensile strength, psi .....	44,700	67,400	72,200
Yield strength, psi .....	nil	52,500	45,600
Elongation .....	nil	15%	20.5%
Impact (modified IZOD test) .....	10-17	120	28
Bursting pressure, psi .....	7,200	14,750	16,200

cast iron. The features mentioned in this article pertain only to true ductile iron.

The type used by Bastian-Blessing was developed in cooperation with its foundry sources after months of painstaking experimentation and testing. The developed standards are maintained only through continuous, strict quality-control procedures. This particular ductile iron has a tensile strength of 60,000 psi minimum, a yield strength of 45,000 psi minimum and 15 per cent elongation. These mechanical properties are roughly equal to those of carbon steel.

What makes ductile iron "ductile"? The graphite formation in the metallographic structure makes the difference. Micrographic studies (see illustration) show that the

board applications. It is also being used by the Coast Guard and on merchant ships for valves and piping. The qualities that have brought ductile iron this acceptance are of special interest to the LPG industry.

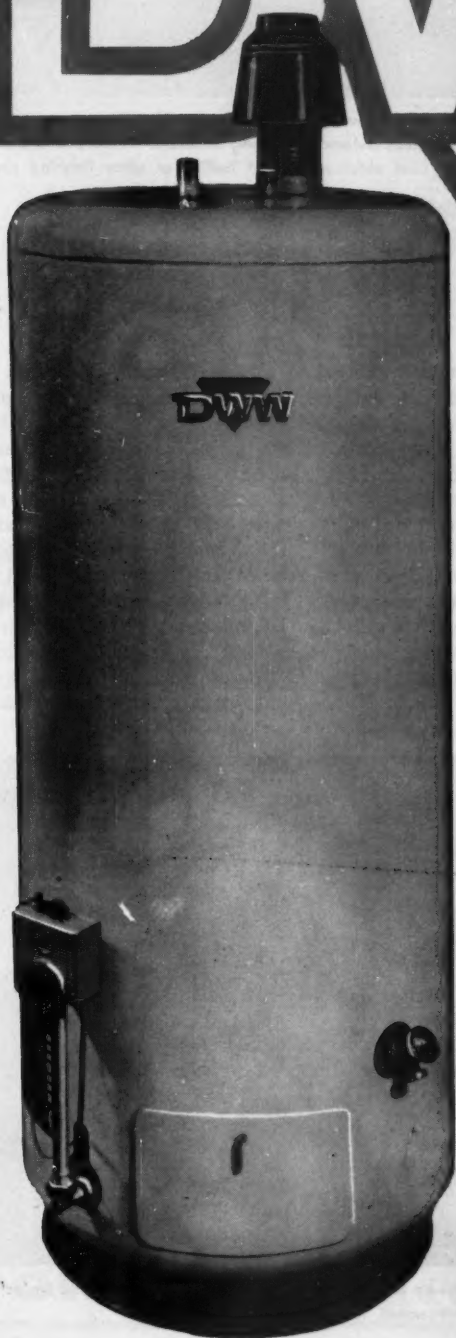
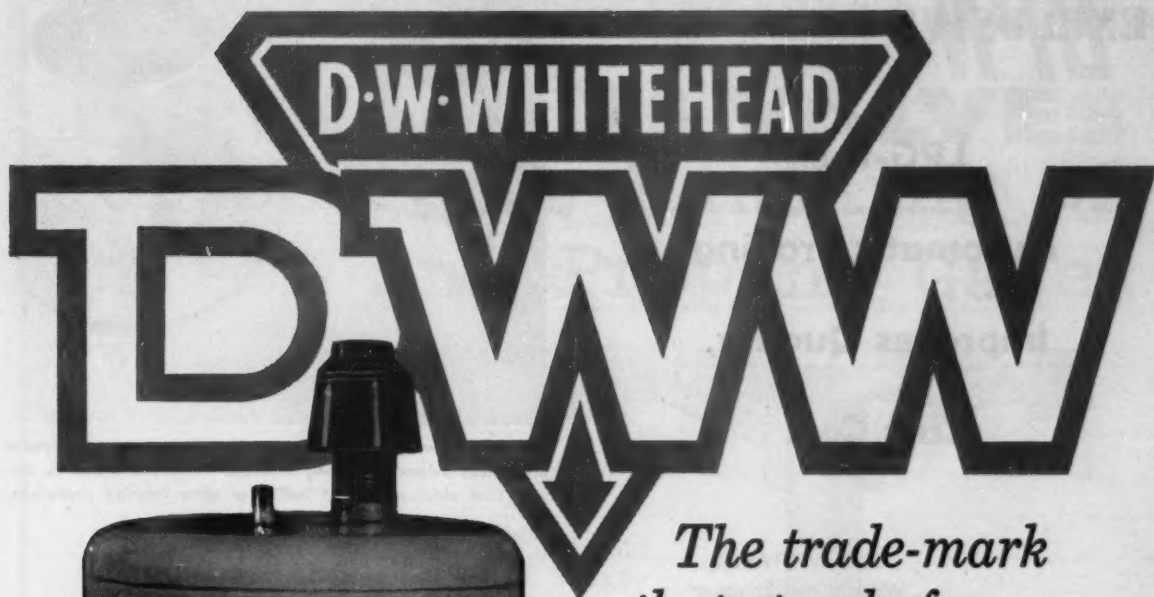
One such quality, pressure tightness, has made ductile iron acceptable for certain high-pressure valve applications. When properly engineered, it is highly resistant to seepage by liquids and gases, and its high-tensile strength permits usage under high-operating pressures.

Ductile iron is resistant to thermal shock. During a test, a 6-in. ductile iron flanged gate valve was exposed to a 1350-deg. F heat in an oil fire, then quenched with a fire hose. Although the fittings



"According to your application, you can't 'tipe' or 'tak dictashun,' but you are a 'wonderful spellur'."





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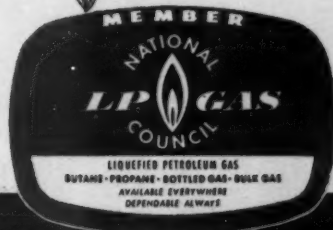
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Aluminum Co. of America, Cooking Utensil Div.

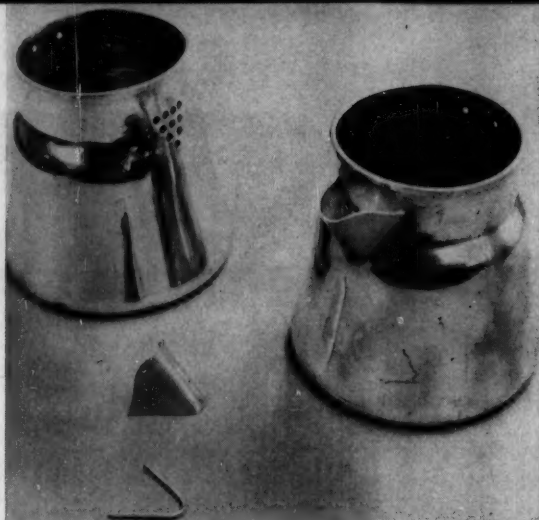
**A**UTOMATIC LPG-fired brazing of aluminum pouring spouts to aluminum coffee pots improves the quality of the finished product and eliminates one of the most expensive manufacturing operations, the Aluminum Co. of America has found.

Alcoa's Cooking Utensil division at Chillicothe, Ohio, manufactures aluminum utensils including coffee pots. A primary requirement is for first-quality ware at a moderate price.

Typical of the operations affecting manufacturing cost and quality is the joining of the pouring spout to the body of the coffee maker. In the past, this was done by oxy-hydrogen welding, producing a joint of high quality and durability. However, a considerable amount of weld material had to be removed by grinding and polishing in order to produce an attractive fillet. These finishing operations added considerably to the manufacturing cost.

Alcoa engineers felt this expensive grinding operation could be substantially reduced by brazing the joint. Aluminum brazing produces a smooth, uniform fillet of a material very similar in appearance and other characteristics to the parent metal. The flux used can be removed by washing and, if the joint is well brazed, the part may be finished by light buffing, eliminating the grinding operation.

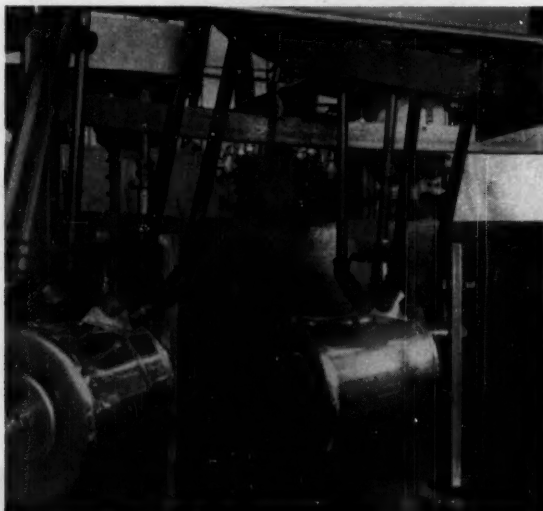
Hand brazing this joint would have been impractical because of



One of the several coffee pot assemblies brazed on the propane-fired Selas automatic brazing machine. Photo shows smooth, uniform fillet obtained without buffing or other finishing operations.



Brazing coffee maker spouts to bodies with automatic LPG-fired machine is the operation shown here.



Close-up of two of the heating stations, showing typical burner arrangement, four burners per station.

# **POWELL LPG VALVES** for the Safe Handling of Butane and Propane Gases

Powell LPG Valves are designed and engineered for the safe and satisfactory handling of liquid or gaseous Butane, Propane, and other Hydrocarbons. The trim and internal working parts of all the valves are easily and quickly renewable. Powell LPG Valves are available in Globe, Angle, Gate and Check Patterns in both bronze and steel.

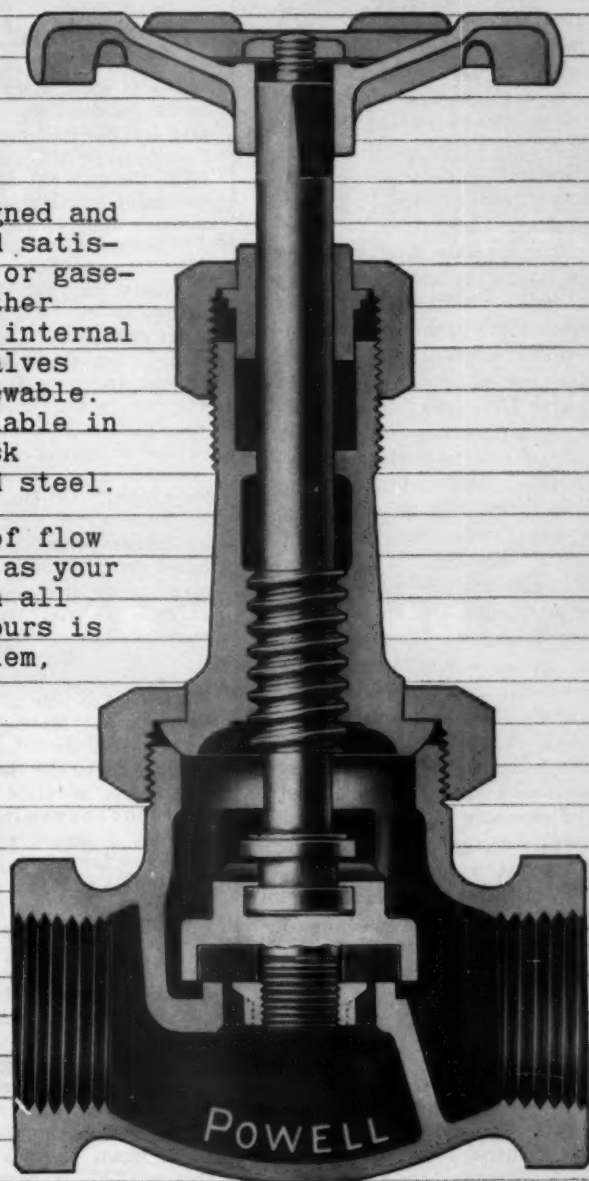
A solution for every kind of flow control problem is as near as your local Powell distributor in all principal cities. Or, if yours is a special engineering problem, write to us.

## **THE WM. POWELL COMPANY**

*Dependable Valves Since 1846*

**Cincinnati 22, Ohio**

Fig. 8150—Bronze L.P.G. Globe Valve (Sectional) for 400 lbs. WOG. Union bonnet, special composition disc, integral seats.



(Listed by Underwriters' Laboratories, Inc.)

**POWELL...world's largest family of valves**



## **LPG-fired aluminum coffee pots**

the high production volume desired and the necessity of uniform heat, since there is less than 100 deg. F difference between the float point of the filler alloy and the melting point of the parent metal.

Automatic brazing, which gives close control over brazing heat, seemed to be a better solution.

Alcoa contacted Selas Corp. of America, Dresher, Pa., an engineering company that had been successful in designing automatic brazing machines for several customers of Alcoa's metal-producing division.

Samples of the parts to be brazed were sent to the Selas Process & Development Laboratory to determine whether this joint could be brazed uniformly and consistently by automatic machinery. Test runs on laboratory equipment demonstrated that it could.

Selas then designed and built an automatic LPG-fired brazing machine that enables one man without special training to produce consistently good quality brazes. The machine and an accompanying Selas Gas Combustion Controller take up less than a 15 x 15 ft floor area. Spouts are now brazed right in the production line, saving various handling costs.

The Selas automatic machine achieves uniform results by stabilizing combustion and heat release, providing a fixed distance and relative position between burners and work-piece, and allowing a fixed time of exposure to heat.

A fixture designed by Alcoa supports the pot body and holds the spout in the correct location.

Each heating station is equipped with Selas PR flame-type burners using ceramic flame screens.

The burners are supplied a controlled mixture of propane and air by a Selas Gas Combustion Controller set to the desired propane-air ratio. That ratio is maintained regardless of wide variations in mixture demand.

The burners are adjusted to provide the exact heating conditions for each of the several sizes and types of coffee makers and the valve for each burner is set to produce the optimum burner pressure.

These settings are recorded and can be duplicated for any repeat of the same job, once they are established by trial runs.

With the Selas automatic brazing machine, one worker turns out

300 to 400 brazed coffee-maker bodies per hour with a negligible number of rejects. Fillets are clean and uniform—without grinding—providing a product of good appearance and durability. The LPG-fired brazing operation is clean and simple and actually contributes to good worker morale. ■

## **Had a check-up lately?**

**"LPG is such a wonderful fuel that it has sold itself for years, so we dealers have put our exteriors in the most comfortable place and let the gas pour out and the money pour in,"** says Tommy Thornhill, young go-getter president of the South Carolina LPGA. **"But the gas out and the money in are not in proportion to the potential market, so check up on your business right now if you haven't done so recently."**

**Check-up on your public appearance**—Is L. P. gas the clean, wonderful fuel we say it is? Or, is it served in sloppy uniforms from dirty, chipped paint trucks? Do your customers see the marvelous modern gas range in a stable or a clean modern showroom? Do your bottles, tank, or meter look as good as "three wires and a glass cased meter"? Do your salesmen wear ties and white shirts? Is your plant immaculate?

**Check-up on your public promotion**—Are you in the public eye as a "Maybe" man or a "Sure, I'll do it" man? Do you belong to the chamber of commerce, a civic club, a fraternal organization, a church, a social club? Do you work for it? Do the other members know you as a sincere member and a man who gives good service in the L. P. gas business?

**Check-up on your advertising**—How many calls have you gotten lately like: "I have two bottles but I don't know what company serves them," "I sure didn't know that you had appliances too," and "You mean engines run on this stuff?" It pays to advertise! If you can't afford newspaper, radio, or TV, talk is cheap. Have you taught your employees why,

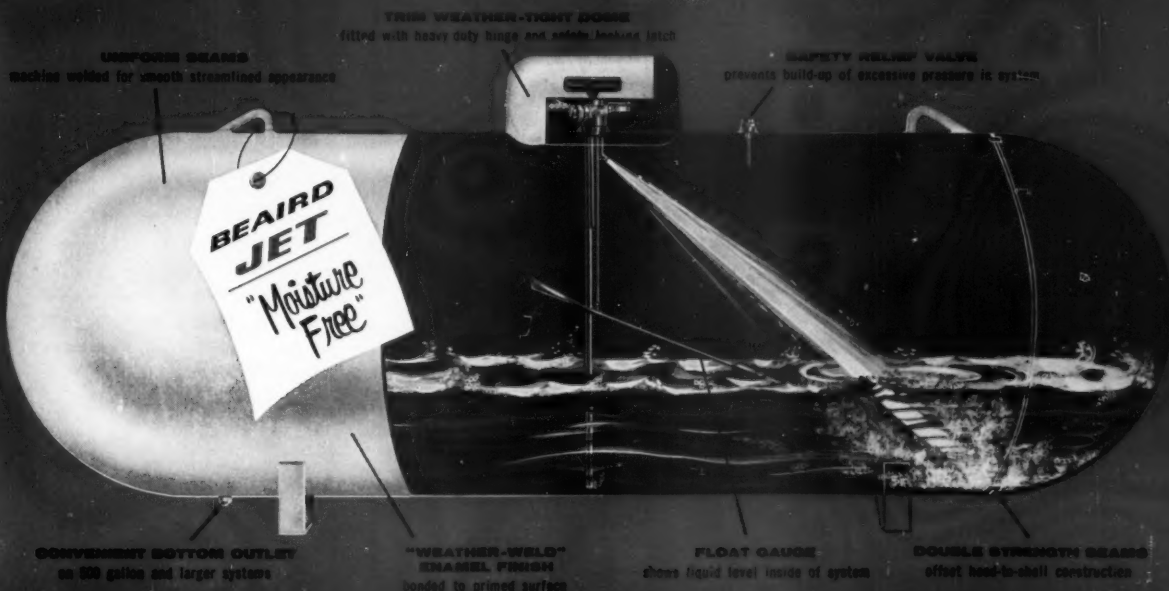
how, where, and when to talk about L. P. gas and what a fine company they work for?

**Check-up on your selling**—Are you selling or taking orders? What's the difference between LPG and some other energy—10 cents per unit or convenience, versatility, dependability, and progress? Do you say "You don't want any today, do you?" or "Here are the reasons why you will be better off buying LPG?" Do you have trained sales engineers or order blank hanks? Are you working for additional load on present customers?

**Check-up on your operations**—Is your company deluged with normal service work or do your customers ask others to service their appliances? Does your customer find it easy to leave you or hard because of past services rendered? Who's the boss—you, your employee, or your customer?

**Check-up on your finances**—Who owns your company—you or the bank? Do you proudly give financial information to recognized credit institutions? Do you discount bills (2 per cent in 10 days gives you 24 per cent to 72 per cent per annum on your money) or pay them when you get around to it?

# Here's the Inside Information...



## ON BEAIRD

## JET FILLED LP-GAS SYSTEMS

Compare Beaird LP-Gas systems with all others and you will find the important quality differences. Only Beaird offers so many advantages to both dealer and customer.

### FOR THE DEALER

There is Jet Filling to speed up deliveries... Thermo-Vacuum dehydration... Moisture-Free system to end freeze-up service calls... top quality fittings for long trouble-free operation... unbroken record of safety... hard hitting merchandising aids... stocking points that lower inventory costs... long term financing.

### FOR THE CUSTOMER

There is Beaird's written guarantee. Dependable, uniform gas service... attractive weather-weld enamel finish... safe liquid withdrawal valve... easy to read float gauge... locking dome to prevent tampering... quality controlled construction for long trouble-free service.

Give yourself and your customer a better deal in '59 as a Beaird LP-Gas System Dealer. Write today for new illustrated brochure.



### THE J. B. BEAIRD COMPANY, INC.

A Subsidiary of American Machine & Foundry Company

Shreveport, Louisiana

Clinton, Iowa

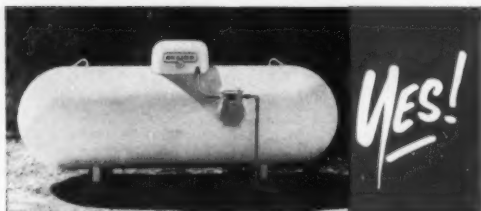
Stockton, California



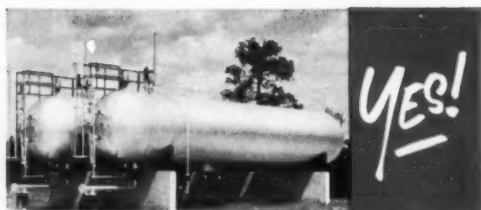
End fitted  
Beaird Blue Belle System  
Jet Filled



# You can *Profit Plan Finance* *all Beaird equipment*



Beaird will help design effective "Metered Gas" programs on long term financing. Customer lease or time payment programs are also available. Up to five full years to pay.



Beaird will put in needed storage tanks or storage plants ready-to-operate with pumps, compressors, truck and rail risers, and all necessary equipment. And it can all be financed on long terms with a Beaird "Profit Plan". From one to five years to pay.



Beaird packaged filling stations can be installed *now* to help increase summer sales. Both truck stop highway locations and commercial and industrial stations can be financed with a Beaird "Profit Plan". Up to five full years to pay.



Beaird transports in new high tensile T-1 or A202-B steels can be added now to save you on transportation costs. You can pay for them while they make you money with a long term Beaird "Profit Plan". Up to three full years to pay.

Start a Beaird "Profit Plan" right now. Call your Beaird representative or write any Beaird plant today . . . for a "Profit Plan" tailored to fit your business future.

Give Beaird the opportunity to say Yes to your financial needs.

## THE J. B. BEAIRD COMPANY, INC.

A Subsidiary of American Machine & Foundry Company  
Shreveport, Louisiana    Clinton, Iowa    Stockton, California

## BEAIRD INTERNATIONAL, INC.

SHREVEPORT, LOUISIANA  
Sales Offices: Calgary, Alberta, Canada — Caracas, Venezuela







The swinging doors of the Golden Bar are decorated with "genuine" autographs of famous western characters. Those who couldn't write supposedly blasted their signature out with a .45!



Golden Gas Manager Nick Linenberger pours himself a drink at the counter cum bar. Curios behind bar and on panel shown below include old guns, gold pans, and a set of carriage lamps said to have come from the hearse that carried Jesse James to his grave! The box on the near end of the bar is a genuine Wells, Fargo Co. strong box from stage coach days.



LPG dealer Ernie Knutzen proudly displays his portrait at the door of the "Golden Bar." Upon close examination, the poster, which is really a Chamber of Commerce award, reads: "Wanted—more citizens like Ernie Knutzen of the Golden Gas Co. He's not dead. He's alive."

## Golden Gas celebrates Colorado's Centennial

**T**HE state of Colorado is currently celebrating its "Rush to the Rockies" centennial, paying tribute to those who took part in the gold rush to the Colorado "diggins" in 1859.

Doing its bit to help along the celebration is the Golden Gas Co., located in the town of Golden, which is 10 miles west of Denver and just three miles east of Buffalo Bill's grave!

Ernie Knutzen, president and owner of Golden Gas, is well known for his unique ideas to promote LPG. (See April, 1959 BPN, page 37.) He felt the centennial offered him a good chance to tie in his business with a civic promotion.

Just inside the door of his place, Knutzen built a partition of rough, old boards, and plastered it with "Wanted" signs, which are illuminated with a gas light. Swinging doors open to reveal the Golden Bar saloon.

A portion of the display area was temporarily re-done in Western style. The counter was turned into a bar with an appropriate line-up of jugs. A table became an old-fashioned poker table. The reverse side of the rough wooden partition was decorated with a collection of real and imitation antiques.

As might be expected, the display has drawn considerable attention and resulted in an increased, highly-amused stream of traffic through Golden Gas Co.'s swinging doors!

FIELD **BPN** REPORT

# news



## U. P. G. Inc. merges with Diversa Inc.

U. P. G. Inc., the holding company for United Petroleum Gas Co., Minneapolis, Minn., announces its merger with Diversa Inc., Dallas, Texas. This merger was unanimously approved by all of the shareholders of both corporations. It involved the exchange of U. P. G. stock for Diversa.

F. T. Carpenter, president of U. P. G. and United, announces there will be no change in the operation of United, except for the acquisition of some additional L. P.

gas operations in central Texas.

United, operating through its subsidiary Consumers Gas Co., has retail L. P. gas operations in Minnesota, North and South Dakota and Wisconsin. Through its subsidiary Flash-O-Gas Inc., it has similar operations around Lubbock, Texas. It also distributes L. P. gas throughout the Mississippi and Ohio River Valley areas. A tank fabricating plant is operated through its subsidiary, Steel Tanks Inc., at New London, Minn.

## AGA's Blue Star Home Answer to Medallion Home

A national program to help builders and gas utilities promote the gas home has been announced by the American Gas Association. Adopting the Blue Star theme, the promotion features the Blue Star Home and the slogan, "Go Modern—Go Gas." Symbol of the campaign is the outline of a house with a blue flame in the center of a blue star.

To tie in with the promotion, builders and gas companies must comply with minimum requirements of the program but can upgrade these requirements in any way they choose. Minimum requirements for tract homes include AGA-approved gas appliances for cooking, water heating, and house heating, plus provision for gas refrigeration, incineration, laundering and air conditioning, where possible. In addition, the builder must "meet functional design requirements that will provide modern, comfortable living," according to the AGA.

More than 50 gas companies have already joined the program. One signed up 52 participating builders in its area.

The program will be backed by intensive national and local adver-

tising and promotion campaigns. A wide assortment of Blue Star home promotional items is being made available.

## Mobile home has all the comforts of city life

At a beautiful spot on the Boise River, about 45 miles from Boise, Idaho, stands Mr. and Mrs. W. E. King's trailer home. King goes fishing nearly every day, and at night, he and Mrs. King play cribbage or enjoy television.

Television and all the other comforts and conveniences of city life are made possible by their Onan Electric Generating Plant, which runs on propane.

"We found an electric refrigerator created a demand on the generator about five minutes out of every 20, and decided it would be more economical to use a gas box," says King. "So, we bought a gas refrigerator to save a lot of wear and tear on the generator."

King has his Onan plant installed in an improvised "lean-to" about 30 ft from the trailer. A large 320-gal. butane tank, leased by the year from a Boise dealer, takes care of his storage problem for the fuel used by both the refrigerator and the generating plant.

Before cold weather sets in,

they'll hook their trailer up to their car and head for California for the winter. And, as they move about, they carry all of their modern home comforts with them.

## Suburban Propane reports sales increase of \$1.5 million

Suburban Propane Gas Corp. reported an increase in sales of close to \$1.5 million for the first six months of this year, as compared with the same period in 1958.

Although this represents a new peak, sales were short of expectations, according to President Mark Anton. He blamed unusually warm weather in the southern area of the company's operations. This factor, combined with higher costs, which were general throughout the industry during the earlier months of the year, resulted in slightly lower earnings for the first six months. Net earnings were \$1,050,872, as compared with \$1,120,015 for the same period last year.

Anton further stated that the gas purchased at high rates has been worked out of the inventory and the per-gallon cost of propane is now lower than a year ago.

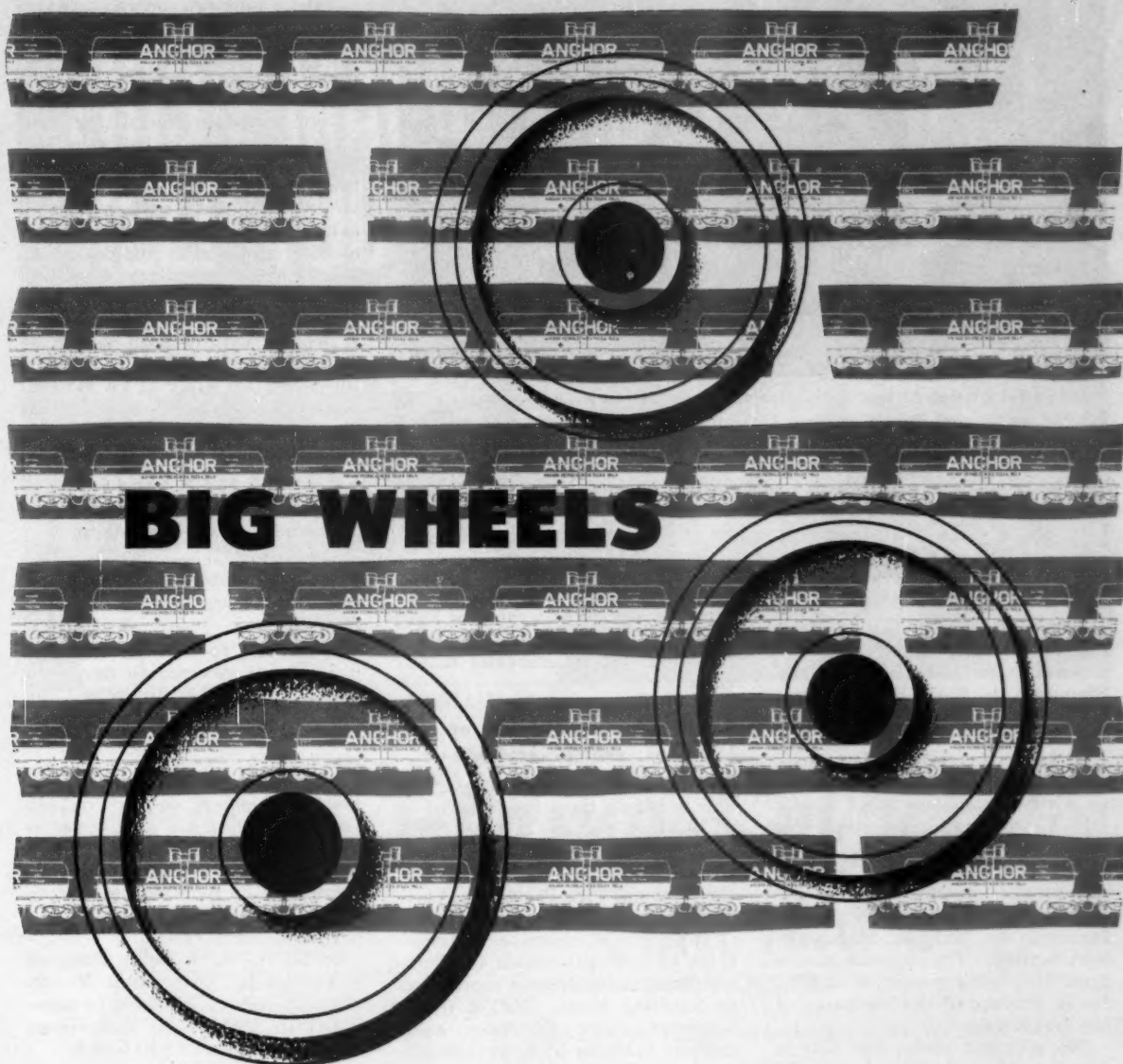
He said that company-wide appliance sales are 34 per cent ahead of last year. The line of appliances manufactured by a subsidiary company, Suburban Appliance Co., has been expanded. Its sales for the first six months increased 76 per cent.

## California Liquid to register 100,000 shares of common stock

California Liquid Gas Corp., Sacramento, filed a registration statement with the Securities & Exchange Commission in September, seeking registration of 100,000 shares of common stock. Of this, 55,000 shares are to be offered and sold through an underwriting group headed by Kidder, Peabody & Co. The additional 45,000 shares, representing outstanding stock, are to be sold by F. M. Rowles, president, California Liquid.

The firm now has outstanding 301,924 common shares and certain indebtedness. Net proceeds of the company's sales of additional stock will be used for payment of bank borrowings and notes, and the purchase of new transport equipment.

The balance will be added to working capital and will be available for general corporate purposes, including possible future use in the acquisition of additional L. P. gas distribution companies.



## ***in the business of supplying you with LPG***

Anchor's nationwide fleet of tank cars gets the LPG to you when you need it! Anchor rolling stock all over the United States has often been the answer to meeting emergency needs and solving

special problems. With more-than-ample facilities, and with an ideal of flexibility to meet your needs, Anchor has built an enviable reputation for service. We offer that service to you. Call now about a contract.

**ANCHOR PETROLEUM COMPANY • TULSA**







Industrial control devices are demonstrated in this new display coach touring the nation for Fulton Sylphon Division, Robertshaw-Fulton Controls Co. Mounted display panels feature parts and assemblies of virtually all products of the division. The coach is equipped with electrical supply, air compression system for operation of displayed controls, public address system, heating and cooling system, and lounge compartment.

### **Samuel Stamping launches national training program**

The most complete service training and product information program in the history of Samuel Stamping & Enameling Co. was conducted recently.

According to Ralph Hines, general sales manager, the first phase of the new program began August 18 with six complete 3-day service schools running consecutively for six weeks.

All distributors, their dealers, and service agencies handling Suburban built-in appliances (manufactured by Samuel Stamping) were invited. The response was so great that most classes were filled far in advance of the beginning of the first school.

The company states that this is just one phase of a program designed to provide complete product and service information to all its outlets.

### **Free rotisserie offered in Cribben & Sexton's promotion**

A Universal gas range with features found in ranges costing more than \$300 is being offered for \$249.95 during a special promotion by Cribben & Sexton Co., a subsidiary of Waste King Corp. As an added incentive, a built-in automatic rotisserie worth \$25 is given free with each range.

The promotion is backed by a full-scale advertising program in local newspapers and trade publications. Point-of-sale displays, posters, envelope stuffers, tie-in ads, and other sales aids are available.

The promotional range has received the AGA Gold Star Award. It will be tied in with the Gold Star promotion on nationwide television programs and in consumer magazines.

### **Firemen features article on L. P. gas vehicle incidents**

L. P. gas vehicle incidents and how to handle them are featured in an illustrated article in the August issue of *Firemen*, internationally circulated magazine published by the National Fire Protection Association.

The article describes various types of L. P. gas vehicle incidents and recommends correct procedures in handling them. NFPA Gases Engineer Clark F. Jones summarizes opinions of several people in the L. P. gas field. Situations covered include: what to do when a vehicle tips over and gas escapes without igniting or what to do when a vehicle is on fire.

The monthly *Firemen* has 30,000 subscribers in fire departments and industry in the United States, Canada, and some 57 other countries.

### **Gaffers & Sattler new World Office opened in September**

Utility Appliance Corp. officially opened the doors of its new Gaffers & Sattler World Headquarters Building in September in Los Angeles, as it celebrated its 35th birthday.

Incorporating advanced electronic processing equipment and several special design features, the Gaffers

& Sattler Building will house all executive and sales personnel in the company's domestic and international divisions, Ben B. Breslow, president, said.

New electronic calculating machines for processing all sales orders, a two-way radio communication system for the company's service division, and a modern dealer's exhibit that can also serve as an auditorium for sales and dealer instruction courses were developed especially for Gaffers & Sattler operations.

Design features such as glare-proof windows, air conditioning, a tile-decorated elevator system, soundproofing, and "piped" music, have also contributed to the modern atmosphere of the structure.

### **7½-ton gas air conditioner powered by long-life engine**

A new 7½-ton gas air conditioning system is in operation at the Public Service Electric & Gas Co.'s Central Gas Plant, Piscataway Twp., N. J. It's powered by a long-life natural gas engine developed under AGA's PAR Program. The unit will reportedly operate at least five cooling seasons without major servicing.

Manufactured by the Comfort Division of Comfort Products Inc., Dallas, the air conditioner is designed to run at least 10,000 hours before overhaul. Only one service call is required per cooling season.

Heart of the system is a 4-cylinder, 4-cycle gas engine designed and built by Continental Motors Corp., Muskegon, Mich., in cooperation with AGA's PAR Task Group for Air Conditioning Research.

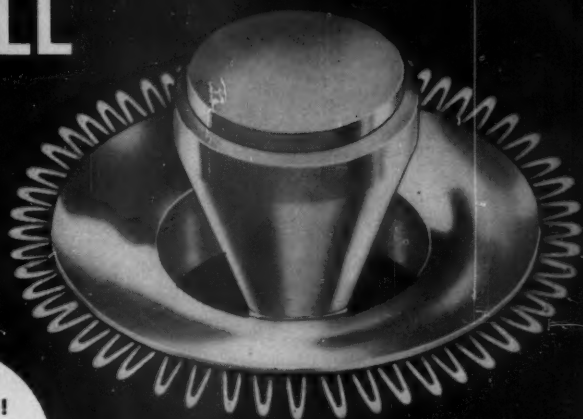
### **Tax overhaul spade-work begins in December**

The powerful House Ways & Means Committee, which initiates all tax legislation, will begin a detailed study of all tax laws late this fall.

As the first step, the Committee has scheduled a panel discussion of the co-op tax problem for December 14. The panel consists of: William Warren, Dean of Law, Columbia University; Samuel J. Lanahan, Washington, D. C., attorney; Fred Peel, Washington, D. C., attorney; Wilfrid Rumble, St. Paul attorney; and Leo Raskind, Vanderbilt University law professor.

Groups seeking to revise the tax laws to require farmer cooperatives to pay at least a single tax on their

# THIS "MAGIC" FEATURE WILL HELP YOU SELL MORE GAS RANGES



## HARPER Flame Selector UNI-MATIC



Accurate heat settings from 150° to 400°.

### HEAT CONTROLLED TOP BURNER

Of course, the Harper name tells you it's precision built. The Uni-Matic *automatically* measures heat and regulates the flow of gas to maintain pre-set temperature with exceptional accuracy. With the added low heat flexibility of the Flame Selector, the flame height can be adjusted to suit any utensil—any size, shape or material.

Combined with the Harper Alltrol Center Simmer burner, you have the "perfect pair" for smooth, profitable selling.

Harper Flame Selector Uni-Matic and Alltrol Center Simmer burners meet basic and optional specifications for AGA Gold Star Ranges.



## HARPER-WYMAN COMPANY

Specialists in Burners and Controls for Domestic Gas Appliances  
Dept. 119-B / 8550 Vincennes Ave., Chicago 20, Illinois

profits appear to stand a good chance of success next year.

The panel on co-op taxation is one of 31 panels which will open a study of all phases of present tax laws. Among other subjects to be studied are: (1) depreciation of capital equipment and, (2) percentage depletion and exploration and development costs in the oil and gas, coal, and other mineral industries.

In the case of depreciation, business has been demanding for years that current tax write-off laws be brought up to date with modern technological developments and business practices.

Percentage depletion for oil and gas producers, however, has been under heavy fire in recent years. It is the highest for any industry at 27½ per cent. Spokesmen for coal and other competing fuels have long claimed that it is a subsidy for the gas and oil producers. Supporters insist that it is necessary to cover the high risks and costs involved in uncovering new supplies.

After the panels wind up late this year, the Committee plans to start holding public hearings on various proposals. It will take most of next year's congressional session to put together the massive tax revision, reform, and—perhaps—reductions which the committee plans.

### **New labor law protects small retailers several ways**

Many small firms will be using provisions of the new labor reform law passed by Congress this year.

Stepped-up union efforts to organize more retail and other white collar workers gives the new labor law special significance to merchants. Several provisions of the new law either directly or indirectly apply to retail unionization efforts or to retail management-labor disputes. They are a clear example of the power of public demands on Congress.

The new law will give many stores their first protection against coercive union picketing. For the first time, they have a place to turn to for help against illegal or damaging union activities.

The new law closes the gaping hole between federal and state control of labor-management disputes. Now, state agencies and courts may use state laws in controlling labor disputes for firms with gross annual sales of under \$500,000 a year. Formerly, the National Labor Relations Board would handle only

disputes in firms with volumes above that figure. But federal courts had barred state officials from stepping into disputes which the federal agency refused to handle. Thus state laws now may be used to insure—for both management and labor—that disputes will be conducted by legal ground rules.

In a controversial section dealing with picketing, the new law flatly prohibits a union from so-called consumer picketing. Thus a firm can not be picketed because it is selling a product of a manufacturer with whom the union is having a dispute. Legally, such picketing is now an outlawed secondary boycott. However, the new law contains a union-sought "sweetener" which specifically permits anti-employer publicity, such as newspaper advertisements, urging customers not to trade.

In addition, the new law permits an employer to demand a union election among his employees when a union is engaged in organizational picketing. (This form of picketing tries to force the employees to join a union and the firm to recognize the union.) This mandatory election may be called if the picketing is halting deliveries of goods by forcing tradesmen to keep out of the store because they refuse to cross the picket line. Further, organizational picketing may continue only for a "reasonable time" even when it is not affecting deliveries or trades-

men. The legal maximum is 30 days.

Another provision tightens up secondary boycott practices. It prohibits a union from making "threats" to promote a boycott by a neutral concern against a firm having labor trouble. In the past, it was illegal for a union to order members who worked for a neutral employer to put pressure on him to cease doing business with a company having labor trouble. But, it did not stop a union from putting pressure directly on the employer, rather than going through the employees. This is now prohibited.

Finally, so-called hot-cargo agreements in the trucking industry are banned. Under these agreements, the union forces a trucking firm to agree to refuse to ship goods from or to a firm having a labor dispute. This includes: no deliveries to a store; refusing to pick up goods at a plant, warehouse, or a railroad; or refusing to continue transporting items shipped part of the way by another trucking firm. This action is now illegal.

### **Business bill boxscore for current Congress**

Businessmen didn't fare too badly at the hands of Congress this year.

But there are hosts of "hot" proposals which—although pigeon-holed this year—will be up for passage in election-year 1960. Most of the bills up for passage are opposed by business. Few business-sponsored measures are likely to get through.

A boxscore of congressional action this year shows that most of the retail victories as well as defeats stemmed from lack of action. On the positive side, a few business-backed bills passed. Let's look at the record.

Business-supported measures which passed include one that limits the right of states to tax income of nonresident firms. Another sets up a bigger loan fund for the Small Business Administration. A third measure gives the Federal Trade Commission a stronger hand in stopping unfair competition by putting its cease-and-desist orders into effect immediately.

The list of measures supported by business which failed to pass is long. Among them are bills: to raise interest rates on rural electrification loans, to raise co-op taxes, to establish a new federal fair trade law, and to give self-employed persons tax help in set-



Cooking and laundry facilities at Sarasota Fla.'s plush new Three Crowns hotel are supplied by LPG. While rooms run as high as \$130 a day, the prime attraction is the Viking Room, the hotel's famed eatery. The gas load for the establishment runs 18,000 to 20,000 gal. annually.





## "The LINDE Finance Plan helps us grow"

**Says John Long, President, Delaware Valley Propane Co., Merchantville, N. J.**

"In this rapidly expanding business, our growth is limited only by the number of cylinders we own. So we are very careful in selecting our supplier, since cylinders represent a major investment. LINDE cylinders meet all our standards of performance. And as the cost is extremely low—only 6% interest on the unpaid balance—the LINDE Finance Plan helps us grow."

A look at any LINDE cylinder will prove his point. It's built for long, hard service. Notice the footring that's designed, constructed, and coated to prevent rust. One seam—not three—gives these cylinders light weight and high strength. And every one is tested to twice the normal service pressure.

Get the facts on LINDE's Finance Plan. It only costs about 25¢ per cylinder per month when you buy on the LINDE Finance Plan. Write Linde Company, Division of Union Carbide Corporation, 30 East 42nd Street, New York 17, N.Y. In Canada: Linde Company, Division of Union Carbide Canada Limited.



"Linde",  
and "Union Carbide"  
are registered trade marks  
of Union Carbide Corporation.

ting up their own retirement programs. The last passed the House but got stuck in the Senate.

No major tax legislation was passed. To be considered in '60, however, are bills to limit or repeal excise taxes, to give small firms deductions for reinvested profits, and, perhaps, to give a general corporate and personal tax cut.

Many business-opposed measures also failed to pass. A bill to raise the minimum wage and bring larger retail firms under its provision was approved by a Senate Labor subcommittee, but did not

come to a vote. President Eisenhower's request for another 1-cent boost in first class mail rates was not passed, but neither was a bill which would raise and make uniform the size and weight limitations on parcel post.

In other fields, Congress did not: pass a law requiring a manufacturer to charge a direct-buying retailer more than a wholesaler; pass any price, wage, or credit controls; take any moves to control shopping center leasing practices or offer small firms lease insurance; set federal standards for state-run

employment compensation programs; or reverse the present limited taxation of some cooperative advertising programs.

No serious anti-business or anti-retailing bills were passed.

President Eisenhower won his fight against congressional big-spending programs which would have added to inflation and seriously hurt chances for tax cuts next year.

*Specifically Designed*

**FOR FOOLPROOF**

**LP-GAS**

**CONNECTIONS**

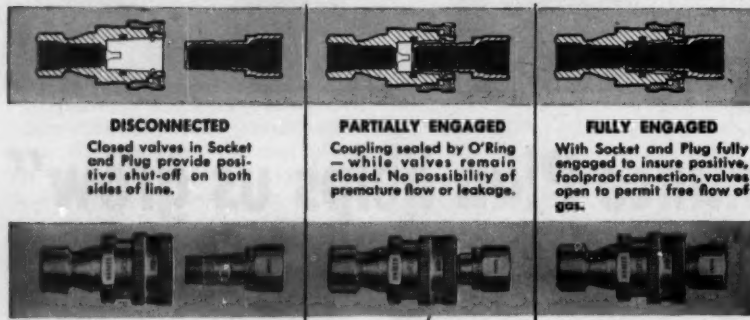
**HANSEN**

**3-GRL1621**

**QUICK-CONNECTIVE COUPLINGS**



NO  
TOOLS  
REQUIRED



**DISCONNECTED**

Closed valves in Socket and Plug provide positive shut-off on both sides of line.

**PARTIALLY ENGAGED**

Coupling sealed by O'Ring — while valves remain closed. No possibility of premature flow or leakage.

**FULLY ENGAGED**

With Socket and Plug fully engaged to insure positive, foolproof connection, valves open to permit free flow of gas.

Specifically designed for LP-Gas line connections, Hansen GRL Couplings completely eliminate the hazard and annoyance of leakage or spillage of gas. To connect (no tools required), you merely push the Plug into the Socket — all the way. To disconnect, just turn sleeve — Coupling instantly and automatically shuts off both ends of line.

Sockets available with 1/4" female pipe threads. Plugs available with 3/8" female pipe threads.

Write for descriptive literature.



APPROVED BY UNDERWRITERS' LABORATORIES

SINCE 1915



QUICK-CONNECTIVE FLUID LINE COUPLINGS

**THE HANSEN**

**MANUFACTURING COMPANY**

4031 WEST 150th STREET • CLEVELAND 35, OHIO

**CALENDAR**

**Coming events  
in the Industry**

**1959**

**October 25-26** — Mississippi LP-Gas Dealers Association Annual Fall Business Meeting and Election of Officers — King Edward Hotel, Jackson, Miss.

**October 26-27** — Minnesota LPGA Convention — Pick Nicollet Hotel, Minneapolis, Minn.

**October 29-30** — 13th National Home Laundry Conference — Statler Hilton Hotel, New York City.

**October 30** — West Virginia LPGA Convention — Stonewall Jackson Hotel, Clarksburg, W. Va.

**December 1** — Wisconsin LPGA Annual Meeting — East Side Businessmen's Club, Madison.

**1960**

**January 18-22** — NFPA Committee Meetings — Hotel Manhattan, New York.

**February 25-26** — Eastern Canada District LPGA Convention and Trade Show — Lord Simcoe Hotel, Toronto, Ont.

**April 2-3** — Western Canada LPGA Annual Meeting — Calgary.

**April 24-25** — Association of Nebraska LPG Dealers Annual Convention — Castle Hotel, Omaha.

**May 1-4** — National LPGA Convention and Trade Show — Conrad Hilton Hotel, Chicago.

**May 16-20** — NFPA Annual Meeting — Hotel Queen Elizabeth, Montreal, Que.

**May 29-31** — Mid-South District LPGA Convention and Trade Show — Peabody Hotel, Memphis, Tenn. (Arkansas and Tennessee will hold their annual state meetings during this convention).

All associations are invited to send in dates of their forthcoming meetings for this calendar.

**BUTANE-PROPANE News**

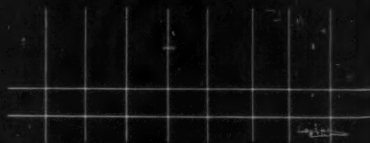


# STEADY PRESSURE

## MITCHELL VAPORIZERS

For the steady, reliable, and efficient operation of your industrial process, the Mitchell Vaporizer is the only unit that can be depended upon to maintain a constant pressure of vapor throughout the entire range of operating conditions. The Mitchell Vaporizer is designed to operate at a constant pressure of vapor throughout the entire range of operating conditions. The Mitchell Vaporizer is designed to operate at a constant pressure of vapor throughout the entire range of operating conditions. The Mitchell Vaporizer is designed to operate at a constant pressure of vapor throughout the entire range of operating conditions.

The Mitchell Vaporizer is designed to operate at a constant pressure of vapor throughout the entire range of operating conditions. The Mitchell Vaporizer is designed to operate at a constant pressure of vapor throughout the entire range of operating conditions. The Mitchell Vaporizer is designed to operate at a constant pressure of vapor throughout the entire range of operating conditions. The Mitchell Vaporizer is designed to operate at a constant pressure of vapor throughout the entire range of operating conditions.



**JOHN E. MITCHELL COMPANY**



## NEWS BRIEFS

### DEALERS

**Pyrofax Gas Corp.** recently opened two new bulk filling plants and one cylinder filling and bulk plant. The bulk plants are in Rhinelander, Wisc., and Troy, Ohio. The cylinder plant is in Inkster, Mich.

**Leafac, Inc.**, an L. P. gas firm, at 1547 National Bank of Commerce Building, New Orleans, La., has been granted charter of incorporation listing capital stock of \$21,100.

**Unruh's Propane & Butane, Inc.**, Newton, Kansas, has purchased the Claassen Propane Co., Inc. If the change is approved, the two companies will be merged under a new name — Mid-Kansas Propane, Inc., with offices in Newton. Ernest A. Unruh will be president of the new firm and Louis Smith will be vice president. Ronald L. Claassen will continue to operate the Claassen Oil Co. in Newton.

**The Chandler Liquid Gas Co.**, Chandler, Okla., has acquired Clanton Propane & Home Modern Gas, Oklahoma City. Liquitane, Inc., as the new company is now known, is headed by: E. B. Nelson, president; G. A. Springer, former executive secretary of the Oklahoma LPGA, vice president; Walter Newman, company accountant; and Duke Duvall, company attorney.

**Two subsidiaries of Parlett Gas Company**, Waldorf, Md., recently purchased LPG companies in their respective cities. Parlett Gas Company of Prince Frederick Inc., Prince Frederick, Md., bought that city's Dorsey Gas Co. Parlett Gas Company of Fairfax Inc., Fairfax, Va., purchased Fairfax Gas & Supply Co. The Prince Frederick operation will be managed by Raymond E. Austin, while R. R. Hare will be in charge of the Fairfax branch.

**Pyrofax Gas Corp.'s** sales office at the New Port Richey (Fla.) Plaza Shopping Center has been closed. All business was transferred to a nearby office on U. S. Highway 19.

**General Gas Corp.**, Fort Valley, Ga., has moved to a new location in the same town.

**Coast Oil & Butane Company Inc.**, Shreveport, La., was recently granted dissolution of its charter of incorporation.

### SUPPLIERS

**Injection of propane** into three completed underground storage caverns as its Todhunter terminal near Middletown, Ohio, has been started by the Texas Eastern Transmission Corp. Dayton Power & Light Co. will use one of the caverns for propane, to be used when needed.

**A six cu ft refrigerator**, manufactured by Norco Inc., was selected as the only gas-operated refrigerator displayed at the New York State Fair Industrial Exposition, September 4, at Syracuse.

**Specialists in industrial controls** manufactured by the Hammel-Dahl Division of General Controls met in Milwaukee, September 17-19, for a series of special training sessions. The course was designed primarily to expand each man's knowledge of the firm's Foster Engineering Division line. It includes pressure-reducing valves, safeties, regulators and flow tubes.

**Combined earnings for ACF Industries, Inc.**, are \$1,963,000 for the first fiscal quarter, which ended July 31. This compares with a combined loss of \$553,000 in the corresponding quarter last year. ACF accounted for \$1,702,000 of the earnings, and \$261,000 were recorded by the wholly owned SHPX group of companies engaged in financing and leasing railroad cars to industrial users and railroads. Combined sales and services were \$77,283,000 during the first quarter, compared with \$42,298,000 for the like period last year.

**Extension of its automatic clothes dryer warranty** from one to five years was announced by the Norge Division of Borg-Warner. The warranty is effective on 1960 Norge clothes dryers introduced by 87 distributors nationally this summer. It applies to all parts except the motor.

**"Quality makes the difference"** was the theme for a most unusual sales meeting. Throughout Squibb-Taylor's two-day program, August 14-15, no emphasis was placed on sales methods. Instead, the two days featured a clinic and forum discussion of human relations.

**Personnel of Robertshaw - Fulton Controls Co.'s** Eastern Research Center has moved into a new building on the Schuylkill Expressway in suburban Philadelphia. It has 17,000 sq ft with about three-fourths of the area designed for research and laboratory work and offices. The remainder is for product testing and model construction.

**Four 7000-gal. stainless steel transport tanks**, which can carry rocket fuel, have been fabricated by Trinity Steel. Three of the tanks have five compartments. The other has four sections, with a 4000-gal. compartment being the largest.

**Suburban Appliance Co.** has been elected to membership in the gas clothes dryer division of GAMA. The company is also a member of GAMA's direct heating, gas furnace and gas wall and floor furnace divisions. A. H. Cote, president of Suburban, and Roger G. Stillman, sales manager, are the delegate and alternate from the firm to GAMA.

**A new flame-shaped cuff-link and tie-bar set** is offered by Handy Flame, 3465 N. College Ave., Indianapolis 5, Ind. The Handy Flame image is hard-fired vitreous enamel in two shades of blue on a rhodium-plated base. The two items are part of a matched set that includes lapel pins, key chain, and earrings. For prices and further information contact Handy Flame.

**On October 1**, Pennsylvania Range Boiler Co. opened its new, completely-equipped, modern glass-lining plant in Philadelphia. It occupies 15,000 sq ft. Large warehousing facilities are included.

### MERCHANDISING

**A cast iron scale model of a Hydrotherm gas-fired hot water boiler** has been made available to contractors and dealers for use as a sales aid. The three-piece model, measuring 4 x 2 x 2½ in., comes encased in a velvet-lined jeweler's box. Direct inquiries to Hydrotherm Inc., Dept. G-2, Northvale, N. J.

**Complete kitchen color planning** by nationally-known color consultant Beatrice West is now being offered to builders by Caloric Appliance Corp. Builders using Caloric appliances receive free complete kitchen decorating information on coordination of floor coverings, wallpaper or paint, counter tops, and accent colors with the appliance colors.

From UNIVERSAL! Never before an offer like this!

Your customers  
**SAVE \$55**

on this new 36-inch GOLD STAR AWARD gas range  
...and in addition, they get a

**ROTISSERIE FREE!**

Worth \$25—factory built-in, motorized and fully-automatic

GOLD STAR  
AWARD  
MODEL  
8073-X



**LIMITED  
OFFER!**

**FEATURES INCLUDE:**

- ★ "Burner-with-a-Brain"
- ★ Timer-clock
- ★ Fully-automatic Ignition
- ★ "Air-conditioned" Oven
- ★ Smokeproof Broiling

**COMPLETE PROMOTIONAL MATERIAL READY NOW!**

Everything you need to make this the gas range sales success of the year—big-space newspaper ads in selected markets plus a promotion materials package that's second to none in the industry!



*See your Cribben and Sexton man or call the factory now!*

# UNIVERSAL

CRIBBEN AND SEXTON COMPANY, a subsidiary of the Waste King Corporation • 700 N. Sacramento Blvd., Chicago 12, Illinois • Phone VAn Buren 6-4800

# WHAT'S NEW

## IN PRODUCTS AND TRADE LITERATURE

*For further information on items reviewed in this section use the convenient post-paid Readers' Service Cards on pages 83, 84*



### **Meter automatically compensates deliveries to a 60 deg. F. basis**

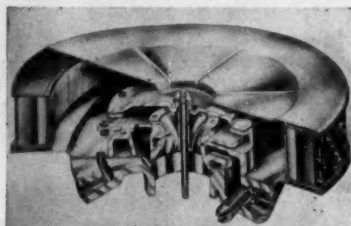
*Circle 1 on Readers' Service Card*

Two new liquid propane meters continuously take the temperatures of the liquid being measured, and automatically compensate each delivery to a 60 deg. F. basis. Announced by Neptune, the meters stop cold-weather inventory losses. They provide more equitable billing and more accurate inventory control, regardless of changes in the temperature.

The temperature compensator uses a bellows-type thermostat. Through a simple lever system,

this bellows controls an accurate, positive, ratchet and pawl variable-ratio drive to the register. The register indicates (and on some models prints) the corrected 60 deg. volume only.

Presently available are temperature-compensating Neptune 30 and 60-gpm L. P. gas meters, in sizes suitable for most tank truck and bulk plant applications. The compensator handles any temperature from minus 10 to plus 125 deg. F. It is calibrated for propane.



### **New adapter allows car to be started automatically**

*Circle 2 on Readers' Service Card*

J & S Carburetor's new adapter features automatic starting without manual choking, electric priming or requiring bleed-through gas. The adapter, when installed with a J & S model 725 regulator, makes it easy to start the car. A floating cone serves as an automatic choke, dropping down on top of the venturi to seal a combustible starting mixture in the manifold. At idle and low speeds, the cone is lifted by a diaphragm to float  $\frac{1}{8}$  in. open, restricting air flow and creating suction at the regulator. At part and full throttle, the cone lifts to the wide-open position.

### **Camp stove can be converted to lamp and lantern**

*Circle 3 on Readers' Service Card*

A multi-purpose camp stove has been announced by Rexo-Therm. It will serve four campers, for three to four weeks on a single filling of propane, yet weighs only 15 lb when filled. Capable of heating six cups of water to boiling in  $3\frac{1}{2}$  minutes, the flame may be adjusted to the exact size required.





## ...in your **BASO® REPLACEMENT DEPOTS**

### **FAST SERVICE FROM COAST**

**TO COAST...** Baso Replacement Depots are your key parts centers for quick replacement service. Each Depot stocks factory-made replacement parts and controls. What's more, you can always depend on fast service from your Baso Replacement Depot.

Your Baso Replacement Depots can deliver one or a thousand Baso valves, switches, pilot burners in any size and capacity, and repair parts to meet your needs. Whether it is a valve, thermocouple lead, or a power unit assembly, you can always get prompt service.

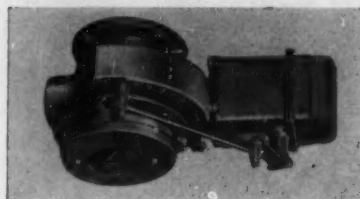
If your dealers want to carry a small amount of stock, your Baso Replacement Depot manager can advise them about the kind of replacement parts to keep on hand. Get in touch with him. He will be more than glad to counsel with you and render service that has made the name **BASO** a symbol of quality in the automatic pilot field.

Remember! There's a Baso Replacement Depot close to you... wherever you are. Write, now, for the name and address of the Depot in your area. Tell your dealer to stop in for a visit and prove to himself that Baso's high-quality service is the finest from **COAST TO COAST**.

# **BASO INC.**

**MILWAUKEE 1, WISCONSIN**  
Dept. SB-9

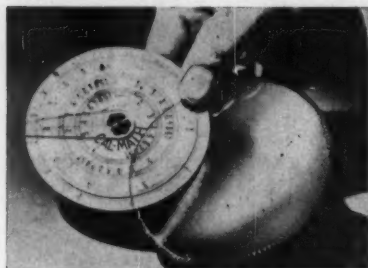
By using standard attachments, the unit can be quickly converted from a camp stove to an 80-watt lamp or lantern with a burning time of 55 hours on a single fueling.



### Varitrol permits right setting for any firing condition

Circle 4 on Readers' Service Card

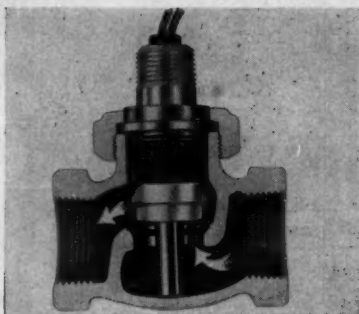
A line of Varitrols (air-gas proportioning valves) for either manual or automatic operation is announced by Eclipse Fuel. They are designed to provide an economical two-in-one valve method of controlling air and gas to provide the proper blending for any firing condition. Returning the control arm to any position insures an air-gas mixture identical with previous settings. The Varitrol is provided with nine individual gas-adjusting screws. Thus, any ratio may be adjusted precisely for each valve position.



### Industrial circular slide-rule is pocket size and easy to use

Circle 5 on Readers' Service Card

A pocket-size circular slide-rule is being offered by Edmund Scientific Co. It performs multiplication, division, combined multiplication and division, fractions, squares, square roots, cubes, cube roots, proportions, percentages, areas, and circumferences. Use it to figure discounts, retail mark-ups, and fuel consumption. Constructed of two durable aluminum discs, it has a clear plastic hairline indicator. It fits easily into shirt pocket, as it is only 3½ in. in diameter. Carrying case and complete directions are included.



### Flow switch provides indication of excess or loss of flow

Circle 6 on Readers' Service Card

Gems announces a flow switch that provides positive indication of flow, loss of flow, or excessive flow of any liquid or gas through a pipe line. Said to operate on a very low pressure differential, it can be installed easily in any pipe line with ordinary tools. The switch can actuate a pilot light, horn or other visual or audible remote warning signal. With suitable relays, it can also be arranged to operate interlocks or other protective devices.



### Ford's 1960 truck line features 2000 advancements

Circle 7 on Readers' Service Card

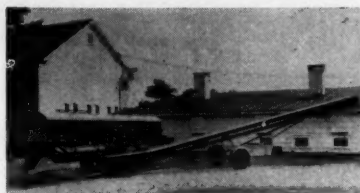
Ford's 1960 truck line incorporates more than 2000 operational and engineering advancements, designed to lower operating costs. Contributing to greater durability and reduced operating and maintenance costs are increased fuel economy and a complete line of additional optional axles permitting the new trucks to do bigger jobs. Other advancements are in frame strength, wiring systems, brake linings, oil pumps, generators, ignition distributors, and fuel pumps. The line, covering more than 480 models, ranges in gross vehicle weight from 4600 to 51,000 lb with gross combination weights up to 76,000 lb. Practically every trucking need can be met from a small retail delivery operation to heavy-duty hauling.



### Incinerator disposes of 1½ bu. of combustibles in 1 to 4 hours

Circle 8 on Readers' Service Card

Introduced by Waste King are two smokeless, odorless indoor incinerators engineered specifically for use in areas where air pollution is a problem. The manufacturer states the incinerators can dehydrate and burn 1½ bushels of rubbish garbage, and other household combustibles in from one to four hours. A multiple burning chamber and an after burner reduce exhaust gases to essentially carbon dioxide and steam. An automatic timer guides both the Custom and Deluxe models through their burning cycles and turns them off after the refuse is consumed.



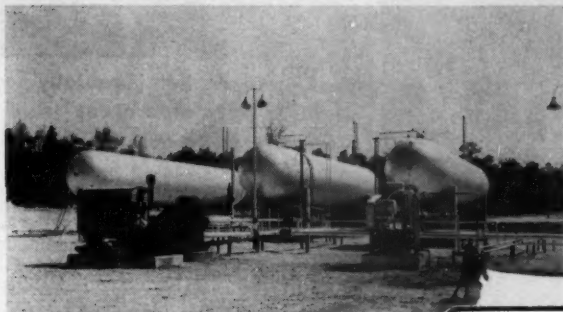
### Infra-red grain dryer is mobile, push-button controlled

Circle 9 on Readers' Service Card

Rite-Way has developed a mobile, push-button-controlled infra-red grain dryer that automatically removes moisture from all types of small grains and beans. Field tests show it is 30 per cent faster and costs only ½ cent per bushel for drying grain. A side-mounted gas rack holds four 100 lb cylinders of propane. This is sufficient for drying 2000 to 3000 bushels of grain. Ten vents remove products of combustion and supply the burners with fresh air. Temperatures never exceed 180 deg. F., in contrast with temperatures as high as 350 deg. F. in old style dryers.

**When Quality Counts...**

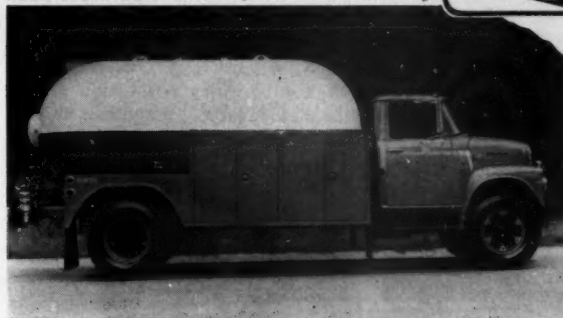
# YOU CAN COUNT ON MISSISSIPPI TANKS



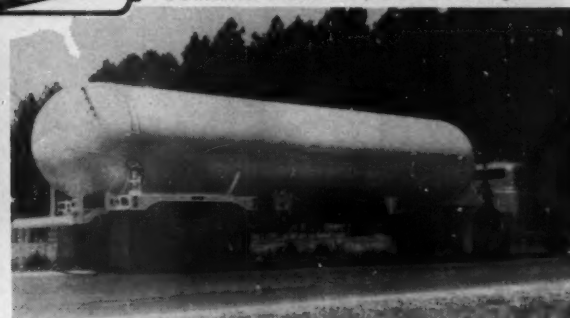
**BULK STORAGE TANKS**—Caps: 6,000 to 30,000 wgs



**DOMESTIC TANKS**—Caps: 60 to 1000 wgs



**DELIVERY UNITS**—Single and Twin Barrel



**T-1 TRANSPORTS**—Caps: 7,600 to 10,650 wgs.

On the outside, all LP gas tanks look virtually the same. The difference is inside: the materials and workmanship, the quality standards of the manufacturer. Mississippi Tanks are constructed of the finest materials with the most advanced manufacturing equipment available. But even more important is the stress we place on skillful, conscientious workmanship. Modern assembly-line techniques enable workers at each stage of production to specialize on their jobs, with resulting economy and improved quality. Mississippi Tank engineers supervise every phase of manufacture to maintain our high standards. Thus, the most important factor about Mississippi Tanks is the quality . . . the dependability we build into them. At the same time, practical engineering enables us to sell these fine tanks at competitive prices.

**FOR LITERATURE ON THE LATEST IN LP-GAS TANKS,  
MAIL THE COUPON TODAY!**



**MISSISSIPPI  
TANK COMPANY**

INCORPORATED  
Hattiesburg, Miss. JUniper 3-0262

**MISSISSIPPI TANK COMPANY, INC.**  
Hattiesburg, Miss.

Without obligation, send literature on:

\_\_\_\_\_ Domestic Tanks      \_\_\_\_\_ Bulk Storage Tanks  
\_\_\_\_\_ Delivery Units      \_\_\_\_\_ T-1 Transports

NAME \_\_\_\_\_

COMPANY \_\_\_\_\_

ADDRESS \_\_\_\_\_

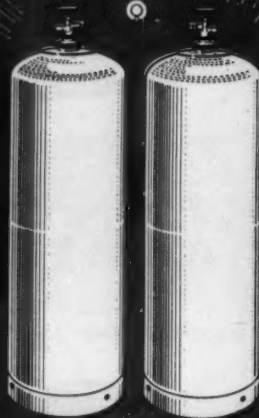
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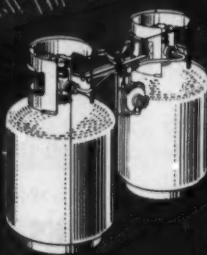
perfect plan  
for profit,  
through  
**WEATHERHEAD**

**CYLINDER RENT**

**100 lb.  
Cylinder  
Leasing  
Package**



**20 lb.  
Trailer  
Package**

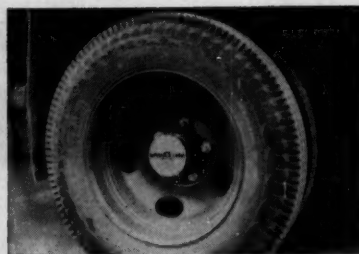


**WARRANTY  
PROTECTION ON  
ALL WEATHERHEAD  
LP-GAS PRODUCTS**



**THE WEATHERHEAD COMPANY**  
LP-Gas Equipment Division  
Cleveland 8, Ohio

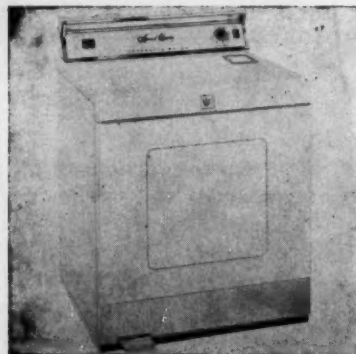
SINCE 1919... 40 Years of Manufacturing Experience



**Back-up alarm bell especially  
useful in populated areas**

*Circle 10 on Readers' Service Card*

A gravity actuated mechanical back-up alarm which rings in reverse only, is announced by Warn Sales. It is especially recommended for vehicles used primarily in business districts, residential areas or highway service, and for warehouse fork-lift trucks. Designed for easy installation on the rear wheel of trucks, the Warn-A-Larm sounds a loud, clear warning four times with every revolution of the wheel in reverse. When the vehicle moves forward, striker devices rest almost motionless in special V-nests. The alarm is a 6 in. diameter bell of chrome plated steel.



**Push-button programming  
featured on 1960 gas dryer**

*Circle 11 on Readers' Service Card*

Push-button programming, a "speed dry" cycle for normal fabrics and the modern lighted control panel highlight the 1960 model gas dryers now being introduced by Speed Queen. Two flip-action push buttons provide the control keys for the selection of high, low or off heat, while the dial-type cycle selector allows the operator to choose normal or short drying periods. Again featured on the inside is the Speed Queen stainless steel drum. New models also have the "sunshine exposure" germicidal lamp, "in-a-door" positive action lint trap, magnetic door latches and foot-operated door openers.

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about New Products  
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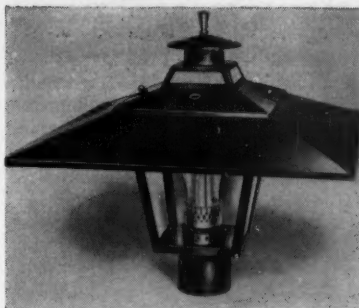
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### Chattanooga Royal offers gas lights for the first time

Circle 12 on Readers' Service Card

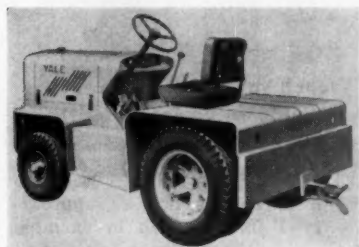
Chattanooga Royal has announced three new outdoor gas lamps. Decorator designed with both traditional and contemporary styling, all finishes are satin black baked-on enamel over bonderized steel. Also announced is an adjustable, ready-to-install gas lamp post. It is supplied with all tubing and fittings. An expanding coil of copper tubing inside the post permits easy height adjustment.



### Lifting tailgate hides away for dock-loading application

Circle 13 on Readers' Service Card

A lifting tailgate, introduced by Watson, folds under a truck or trailer body allowing direct contact by body bumpers against a loading dock. Where dock facilities do not exist, it "comes out of hiding" at a flip of the control lever, lifting and lowering up to a 1200 lb payload. It mounts to 1½ ton and larger trucks.

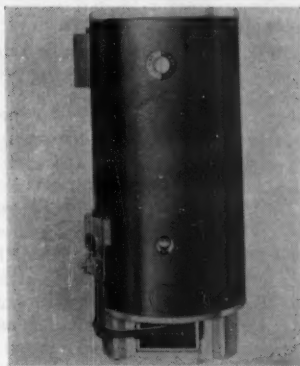


### L. P. gas tractors have turning radii of 122 in.

Circle 14 on Readers' Service Card

Yale & Towne has developed a compact, heavy-duty, pneumatic tire L. P. gas-powered industrial

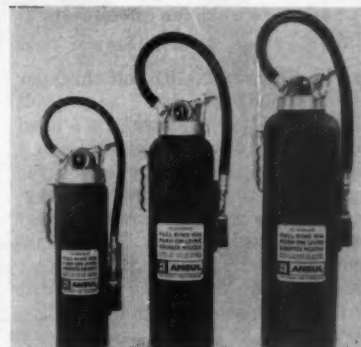
tractor. In 3000, 4000 and 5000 lb draw-bar pull capacity, the tractors measure 102½ in. in overall length and have turning radii of 122 in. A 72-hp, 6-cylinder Chrysler industrial engine powers the line. This power is transmitted through an 11-in. clutch and "Fluid Coupling" to 4-speed forward, one reverse, synchromesh transmission. Normal travel speeds are 13.6 miles per hour in forward and 1.8 mph in reverse.



### Instantaneous booster combines small size, big performance

Circle 15 on Readers' Service Card

Day & Night has added a "Jetglas" protected instantaneous booster heater to its commercial line. It is 46 in. high and 20¼ in. in diameter. Combined are a 23 gal. storage capacity with a high speed recovery of 80 gph at 100 deg. rise. Design features include: flue construction for rigid strength and a full-floater tank for high speed recovery of maximum heat transfer surface.

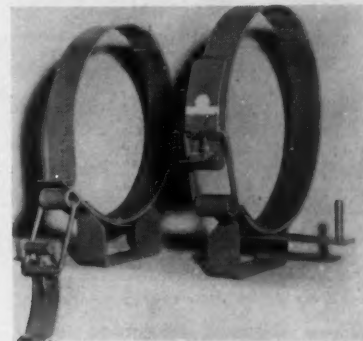


### Fire extinguishers available in 10, 20, 30 lb capacities

Circle 16 on Readers' Service Card

A line of hand portable dry chemical fire extinguishers, in 10, 20 and 30 lb capacities, is announced by Ansul Chemical. The

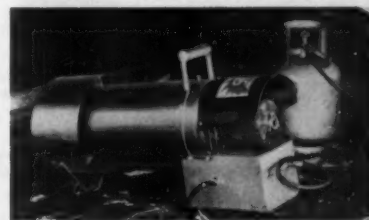
Sentry "Energized" series is based on the stored pressure principle, but incorporates several significant advances in extinguisher design. These advances make possible one-hand operation, faster and easier recharging procedures, and trouble-free maintenance.



### Mounting brackets available for every industrial machine

Circle 17 on Readers' Service Card

A dual strap bracket for horizontal mounting of 33½ and 43½ lb ICC propane cylinders is announced by Industrial Gastruck. The steel bracket has adjustable toggle clamps, is web-lined for cylinder protection and is equipped with locating pin for cylinder positioning. Brackets are available for every model industrial machine. Vertical stationary, tilting base, horizontal mountings for 14 and 20 lb cylinders and special mounting supports are also available.



### Portable 20,000 Btu space heater has many applications

Circle 18 on Readers' Service Card

A portable space heater, which burns L. P. gas, is ideal for keeping workers warm in any unheated area. It is also useful for preheating truck engines as well as thawing out frozen equipment and materials. It is engineered for quiet, sootless production of high volume heat—200,000 Btu's. A ½ hp motor drives a fan that circulates the warm air at a rate of 2000 cu ft of air per minute. The standard model includes a burner

control that quickly turns off the fuel should the power fail or the flow of gas be interrupted.



### Master tanks filled faster with new Multi-Valve

Circle 19 on Readers' Service Card

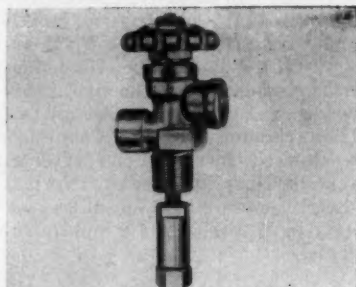
Now standard equipment on all domestic tanks produced by Master Tank & Welding is a Multi-Valve with a separate fill valve. This system utilizes splash filling, which creates a refrigerated condition in the tank and reduces the vapor pressure. The tanks can then be filled without using a vapor return hose. Friction is cut to a minimum and strain on the truck pump is greatly reduced as a result of the direct flow on the separate fill valve.



### Plastic sealing tape sample sent on request

Circle 20 on Readers' Service Card

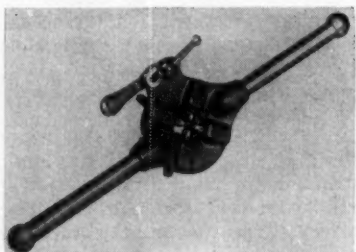
A plastic tape called Tape-Seal is now available for sealing threaded pipe joints. Advantages are said to include: applies quickly; eliminates dripping or splattering; unaffected by temperatures from minus 250 deg. F to plus 500 deg. F.; completely inert; can be used on any type of metal or non-metal; does not harden after application; and maintains pliable characteristics. Available in widths of 1/2, 3/4, or 1 in., in self-dispenser rolls of 250, 500 and 1000 in.; also in 70-in. do-it-yourself kits. Samples sent on request.



### Valves for ICC cylinders immune to movement, vibration

Circle 21 on Readers' Service Card

Rego recently added two new valves to its line. They are specifically designed for use on ICC cylinders that are subject to movement and vibration. A spring-loaded excess flow check is provided on these new cylinder valves rather than the ball check used on other valves. This eliminates accidental closing of the excess flow valve, which can occur when a ball check is subjected to vibration and movement. One valve is designed for vapor, the other for liquid. The latter has a 1/4 in. NPT connection for a dip pipe.



### Quick-opening bolt threader speeds power drive threading

Circle 22 on Readers' Service Card

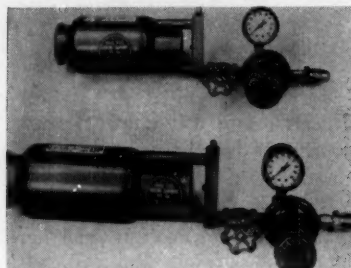
The Ridgid No. 101 bolt threader is designed for fast, easy bolt threading. It has just one die head for all bolts dies from sizes 1/4 to 1 in. Loosening the locking lever gives quick, foolproof setting of the easy-to-read size bar for standard, over- or undersized thread. The quick-opening lever retracts dies for fast removal of threader from bolt without stopping power drive.

### New hot water boiler is the smallest Hydrotherm available

Circle 23 on Readers' Service Card

An LPG 46,650 Btu per hour input model has been added to Hydrotherm's line of hot water boilers. It stands 17 x 26 x 13 in., making it ideal for heating areas

requiring no more than 200 sq ft of installed radiation. Special insulation permits its use on combustible flooring. In volume water heating applications, it raises 75 gal. of water by 60 deg. F in one hour.



### Liquid LPG burners produce 2300 deg. heat instantly

Circle 24 on Readers' Service Card

Two liquid L. P. gas burners, one with 600,000 Btu capacity and the other with 1 million Btu capacity, have been announced by Dual Fuel. Both are guaranteed by the manufacturer to produce 2300 deg. of clean, non-pulsating heat instantly, without pumping or pre-heating. Light weight and simplicity of operation combine with the ability to operate at peak capacity on a 20 lb bottle of L. P. gas until the last drop is gone.



### "Trench saw" will cut trench 1 in. wide to variable depths

Circle 25 on Readers' Service Card

The "Trenchsaw," designed to cut a narrow trench of approximately 1 in. in width to variable shallow depths, has been introduced by Auburn Machine. It is powered by a portable high speed, 2-cycle chain saw engine which can be easily detached and used for a chain saw. The digging chain equipped with specially designed digging bits is driven from the chain saw



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- Long-lasting, one-piece Nylon valve guides.
- Lifetime corrosion protective finish.
- One-piece, corrosion and impact resistant plastic index box glass ends breakage problems.
- Wall mounting lugs for quick installation.
- Tangent adjustable through meter inlet without removing top.
- Synthetic grommet-type flag rod seals for minimum friction.
- Oil impregnated, porous bronze bushings.

Rated capacity 45 cfh propane and 40 cfh butane at 1/4-inch w.c. differential — 5 psi working pressure — 1/4-inch F.P.T. connections — shipping weight 8 lb. F.O.B. Philadelphia.

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Morristown, N. J.

engine through a step-down drive to obtain the proper speed for trenching. The Trenchsaw with engine weighs less than 70 lb.



### Salamander has furnace-type burner with double injection

Circle 26 on Readers' Service Card

Wemco introduces its Model 200 L. P. gas salamander. It features a furnace-type burner. Double primary air injection results in greater heat output and fuel economy. A 100 per cent automatic safety shutoff has also been added. It incorporates a pilot burner for greater safety and a throttle-valve for adjustable heat control.

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- 30% lighter frame than steel
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A complete line (Model 8325 shown above). Models available with air or zero pressure tires to handle loads up to 1,000 lbs.

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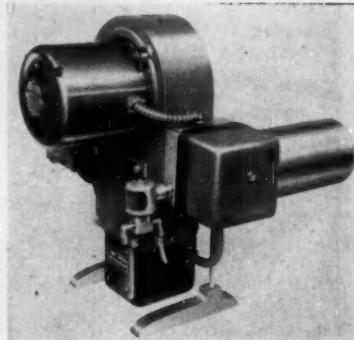


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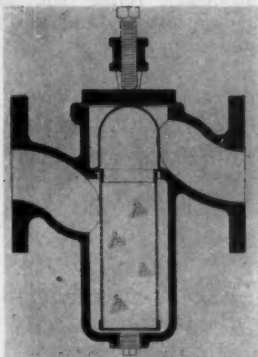
FORMERLY MOELLENBROCK & WILKE, INCORPORATED



### New burner converts coal, oil furnaces and boilers to gas

Circle 27 on Readers' Service Card

The Liberty power gas burner is designed for the conversion of commercial and industrial coal or oil furnaces to gas. Minneapolis-Honeywell electronic safety controls are standard equipment. Main gas valve will not open until pilot flame is proven. Intermittent pilot, electric ignition, pilot is burning only when burner is operating. One air adjustment automatically allows proper amount of primary and secondary air. Available with pedestal or flange mounting in three models—400,000-, 700,000- and 1 million-Btu per hour input.



### New pipe line strainers have quick-opening cover

Circle 28 on Readers' Service Card

A line of single-basket pipe line strainers has been developed by Schutte & Koerting. They are carried in stock in 2, 2½, 3, 4, and 6 in. sizes, all with flanged connections. The rating is 125 psig working pressure (cold). Cast iron is used for bodies and covers. A ductile iron quick-opening cover clamp is provided on all sizes except the 6 in., which has a bolted-on cover. A bulletin is available.



### New nozzles boost flame-cutting speeds

Circle 29 on Readers' Service Card

A selection of improved flame-cutting nozzles has been introduced by Linde. Included are bendable nozzles for riser removal, and nozzles for fin washing, general-duty cutting and high-speed mechanized shape cutting. The Oxweld 1523 and 1524 Series nozzles are designed without spuds and have a deeply recessed cutting oxygen bore for added fin-washing capacity. Bendable nozzles for riser removal have 10-in. long nozzles and 10 preheat outlets. The 1539 Series nozzles produce a low-velocity oxygen stream and will pierce and remove rivet heads twice as fast as ordinary nozzles.

### Trenching tool digs by itself while workmen prepare the pipe

Circle 30 on Readers' Service Card

The "Davis Pup Trencher" is self-propelled so it can dig by itself while workmen are preparing the pipe for the trench. Propulsion is provided by a winching mechanism with a 6-speed drive. The unit can be started, set at a desired depth and left unattended for the most part until it finishes the trench. It will dig either 2- or 3-in. wide and down to 3-ft deep.

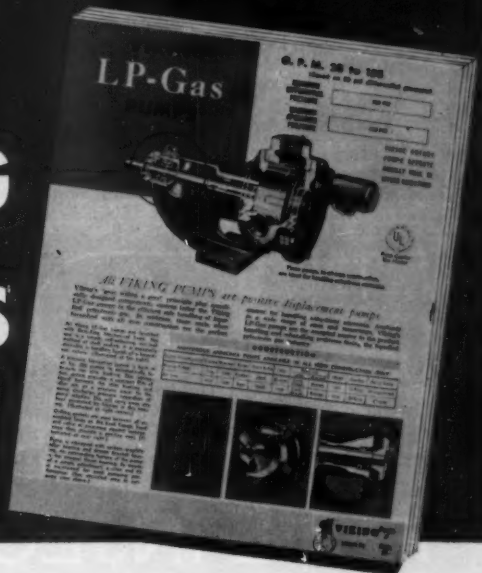
### Double-action gate valves require no lubrication

Circle 31 on Readers' Service Card

Flow control on distribution lines for gases is readily handled by the W-K-M pressure sealing steel gate valve, which provides a tight seal both upstream and downstream, and requires no lubrication. It's available in ASA 150- and 300-lb classes in a range of sizes from 2 to 30 in. Designed for a wide variety of general industry uses, it features a full bore. Seats

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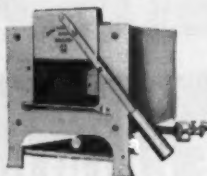
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America's most advanced  
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The McClain System is the original pressure system of carburetion for LP-Gas.

### PRINCIPLE OF OPERATION

LP-Gas is metered into the carburetor mixing section at approximately 2 lbs. assuring better gas-air mixing.

**FUEL ECONOMY** In test after test where McClain has replaced conventional conversion equipment, owners report fuel savings of from 22% minimum to 40% maximum.

**FAST STARTING** Due to the LP-Gas entering the carburetor mixing chamber under pressure the engine starts instantly.

**MORE POWER** Owners report that with McClain they get even more power than they did with gasoline and FAR

BETTER THAN WITH competitive LP-Gas equipment.

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Fast acceleration is assured by a constant LP-Gas supply at the carburetor under pressure. No time lag waiting for a vacuum regulator to supply gas through a long hose.

### SIMPLE DESIGN

The vaporizer-regulator's simple compact design eliminates complex systems and multiplicity of parts.

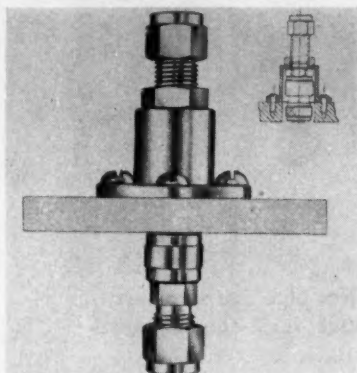
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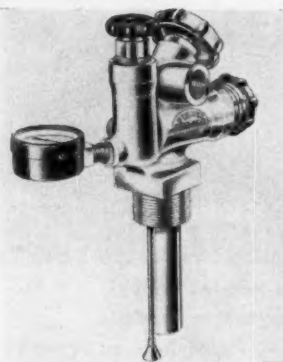
automatically adjust for wear, provide automatic relief from excessive body pressure, and are fully protected from line flow.



**Adapter unit is flush rear-mounted on instrument panels**

Circle 32 on Readers' Service Card

Development of an adapter unit for flush rear mounting of Swagelok bulkhead quick connect fittings on instrument panels, is announced by Crawford Fitting. Application of this flange permits a more uniform and attractive appearance on the front of the panel board, since there are no projecting parts of the quick-connect.



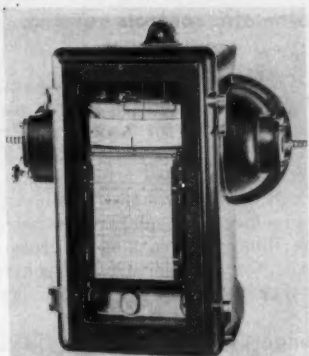
**"Combovalve" specifically designed for vapor zone filling**

Circle 33 on Readers' Service Card

An improved version of the "Combovalve" multiple-head unit has been added to Fisher's line of valves and fittings. It features higher filling capacity, horizontal filling connection, a lower silhouette and standard wrenching flats. It is intended for use in three-opening bulk systems in which a separate safety relief valve and float gauge are installed. It is specifically designed for vapor-zone filling, to take advantage of recent findings in this area.



For further information on these products use Readers' Service Cards on pages 83, 84



**Gas density recorder provides continuous, accurate readings**

*Circle 34 on Readers' Service Card*

The Pollux gas density recorder provides a continuous and accurate recording of the absolute gas density to meet every type of automatic process controlling requirement in the gas production industry. Now available through Air Conditioning Equipment Corp., the recorder operates mechanically and is particularly designed for measuring combustible gases and for installation in hazardous areas.

**Hand scarfing torch features universal mixer**

*Circle 35 on Readers' Service Card*

Introduced by Linde, a hand scarfing torch has a universal mixer that enables it to operate on either acetylene or fuel gas. The Oxweld C-65 is equipped with a starting rod feeder that provides quicker starts and prevents the formation of "fins" by eliminating normal preheat time. Specially designed nozzles used with the torch are shorter (4 9/16 in. long) than conventional nozzles. It is available in 36-, 42- and 48-in. lengths.

**TRADE LITERATURE**

**LPG metered service guide**

*Circle 36 on Readers' Service Card*

Included in the "Guide to L. P. Gas Metered Service," are details on handling, installing, and testing L. P. gas meters. This American Meter booklet contains handy tables for simplifying meter selection and installation. Tables cover the "Approximate Conversion Factors for Propane," "Equivalent Length of Pipe for Various Fittings in Feet," "Sizing L. P. Gas Pipe or Tubing," "Meter Selection Chart for Average Consumer Loads," and "Meter History Cards."

**National safety color code**

*Circle 37 on Readers' Service Card*

McDougall-Butler announces the availability of its folder, "National Safety Color Code." It covers the National color identification system for safety promotion and more efficient industrial production through equipment identification. The color codes are furnished by McDougall in "hardcote" colors available in gallon, quart, and pint containers. Also available in 16 oz pressurized spray cans.

**LPG as fork truck fuel data**

*Circle 38 on Readers' Service Card*

A 6-page color brochure available from Clark Equipment discusses the advantages of L. P. gas as a fork truck fuel. A comparison is made between the operating characteristics of L. P. gas and gasoline, with emphasis on savings possible with L. P. gas. Example of savings from six actual applications are given. Sketches illustrate construction features of Clark's factory-installed L. P. gas fuel system.

It's the **BROWN**

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**SUCH QUALITY MEANS LEADERSHIP**



To lead in a competitive market, a product must have something extra. The new BROWN Featuramic Gas Range has that something extra — QUALITY. Classic design, outstanding features and the look of excellence tell you that here is the leader in quality — BROWN.

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**BROWN STOVE WORKS, INC.**  
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### Financial planning booklet

Circle 39 on Readers' Service Card  
"Planning Your Financial Future for Profit and Security," is the title of a 32-page booklet published by Cities Service. It discusses: financial needs and sources, financial tools such as records, ratio analysis, profit and loss statements and balance sheets, and sources of capital. One chapter is devoted to estate planning and insurance coverage, to protect both family and the business.

### LPG Spanish-language booklet

Circle 40 on Readers' Service Card  
"LPG Y Usted," a 24-page booklet, written in Spanish, has just been published by Singer Products. The text explains the composition and production of LPG, details the operating and cost advantages, and analyzes an LPG motor fuel system. Instructions are given for converting a vehicle and for all types of LPG installations. In addition, the safety and economy features are graphically presented.

### Automatic controls catalog

Circle 41 on Readers' Service Card

White-Rodgers 1959-1960 catalog lists the firm's entire line of automatic controls for heating, refrigeration, and air conditioning. Full specifications, plus a description of operation and general applications are included in each product listing. The illustrated catalog is cross-indexed for easy location of controls by type or use.

### Gauge catalog

Circle 42 on Readers' Service Card

Rochester Gauges' 24-page catalog illustrates and describes the company's full line of gauges, including magnetrons, flow indicators, remote indicating gauges and motor fuel gauges. All have dial faces and are magnetic.

### Finned-tube heat exchanger data

Circle 43 on Readers' Service Card

A 4-page bulletin, just published by Schutte & Koerting describes the company's line of "Radiafin" heat exchangers for air and gases. The exchangers serve power and process applications for heating, cooling, or dehydrating air and other gases. The bulletin describes and illustrates the continuous, spiral-wound fins. Crimped to provide extra surface and to promote turbulence, they are bonded to the tubes by tinning.

### Data on LPG as fork truck fuel

Circle 44 on Readers' Service Card

Advantages of L. P. gas as a fork truck fuel are discussed in a brochure available from Clark Equipment. A comparison is made between the operating characteristics of L. P. gas and gasoline. With emphasis on savings possible with L. P. gas, examples from six actual applications are given. Sketches illustrate construction features of Clark's factory-installed L. P. gas fuel systems.

### Heating, cooling design book

Circle 45 on Readers' Service Card

A 70-page design handbook, covers all aspects of low cost, zone control hot water baseboard heating for new homes. It's offered by Edwards Engineering. Included are sections on construction, installation, dimensions, specifications, features and photographs. Also included is a detailed section on air conditioning.



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## Pa. LPGA plans farm show exhibit

WITH more than 125 members attending, the annual Pennsylvania LPGA Convention was a rousing success at the Cocoa Inn in picturesque Hershey, Pa., recently.

The one-day program got under way with the annual business meeting. Here the association's plans for the coming year were discussed. Of high interest at this meeting were the plans for the 1960 Pennsylvania Farm Show, Unified Gas Exhibit. At this show, to be held next February in the State Capitol at Harrisburg, the LP gas men and the gas utility men will get together for the third straight year to set up an exhibit to promote the use of gas and gas appliances.

"Look What GAS Is Doing" was the theme of the 1959 exhibit at the Farm Show. It drew over 750,000 people from Pennsylvania and the six states surrounding it. The exhibit was termed a "show-stopper" by Moylan E. Brown, LPGA's East Central district secretary.

The Pennsylvania LPGA committee, set up to work with Penn-



Officers elected by the Pennsylvania LPGA for 1959-1960 are (from left) John W. Stoner, second vice president; Paul Haines, first vice president; Russell C. Trexler, president, and E. Sterling Smith, treasurer. Association secretary James L. Downall was absent.

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sylvania Gas Association for the 1960 show, consists of (Chairman) M. J. Board, Suburban Gas Service; Mark O. Haines, Gas Oil Products, Inc.; Paul Haines, Haines Gas Service; W. A. Jefferson, W. A. Jefferson Bottled Gas, and James Hays, Jr., Town and Country Gas.

Arthur E. Bone, last year's president of the National LPGA and a past president of the State association, will be among the committee members representing the P. G. A. this year.

Following the business meeting, the association's officers for the

1959-1960 term were elected. Chosen as president was Russell C. Trexler, Trexler Gas Service Co. Paul Haines remained a vice-president and was joined in that capacity by John W. Stoner, Stoner Gas Service. E. Sterling Smith, Fuelane Corp., replaced Stoner as treasurer and James L. Downall, Protane Corp., will serve again as secretary.

Med Serif, assistant director of the Business Research Dept. for Cities Service Petroleum Co., was the first speaker of the day and gave a talk on "The Art of Making Friends in Business." This, said

Med, is what good community relations is.

"All of you," he told the delegates, "are small business members according to Government statistics. You are therefore a part of the backbone of the Nation. You might say you are in the 'people business.'"

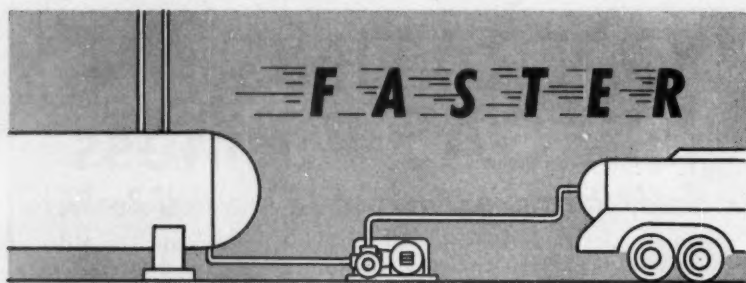
He went on to cite figures that show that 68 per cent of customer losses come through indifference and lack of interest on the part of the seller. And, he gave six reasons for building Good Relations: 1, Business Survival; 2, Business Welfare; 3, Business Promotion; 4, Public Opinion Development; 5, Personal and Family Welfare; 6, Personal Satisfaction.

#### LPGA appoints heads for 19 committees, 6 sections

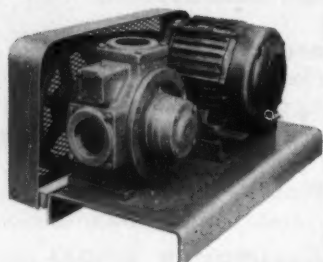
Chairmen of the 19 standing committees and six sections of the LPGA for the 1959-60 association year have been announced by President F. L. Fagan, Gem Automatic Gas Co., Granite Quarry, N. C.

The appointees also become members of the group's board of directors. They will serve one-year terms.

The committee chairmen are: G. R. Postlewait, Framgas Inc., Chagrin Falls, O., Appliance Specifications; L. A. Brand, Empire Stove Co., Belleville, Ill., Constitution & Bylaws; W. R. Sidenfaden, Suburban Gas Service Inc., Pomona, Calif., Convention Committee; K. H. Koach, Green's Fuel Inc., Sarasota, Fla., Distinguished Service Award; C. E. Blome, Wm. Wallace Co., Dallas, Tex., Educational; A. B. Ritzenthaler, Tappan Co., Mansfield, Ohio, Finance; C. A. Childers, Sungas Distributors, Raleigh, N. C., Gas Fuel Technology; J. W. Martin, Shamrock Oil & Gas Corp., Amarillo, Tex., Gas Unity; L. E. Nyberg, Western Propane Co., Batavia, Ill., Insurance; J. A. Storm, Sinclair Oil & Gas Co., Tulsa, Okla., Legislative; Frank Perry, Cities Service Oil Co., Bartlesville, Okla., L. P. Gas Specifications; C. J. Bender, Trinity Steel Co., Dallas, Texas, Market Research; C. O. Russell, Thermogas Co. Inc., Des Moines, Iowa, Planning & Organization; D. B. Barton, Skelly Oil Co., Kansas City, Mo., Publicity & Publications; W. A. Schuette, Hausgas Inc., Washington, Mo., Safety; Paul Tucker, Phillips Petroleum Co., Bartlesville, Okla., Technical & Standards; F. A. Shellhorn, An-



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chor Petroleum Co., Tulsa, Okla., Transportation; J. D. Lay, Marshall Butane Gas & Appliance Co. Inc., Albertville, Ala., Membership; and W. A. Naumer, Pyrofax Gas Corp., New York, N. Y., National Affairs.

LPGA has also appointed a slate of section chairmen. These men head occupational groups within the association. They are: Reeves Brown, Hardwick Stove Co., Cleveland, Tenn., Appliance Manufacturers; M. B. Gault, Robertshaw-Fulton Controls Co., Youngwood, Pa., Equipment Manufacturers; J. H. Williams, The Weatherhead Co., Cleveland, Ohio, International; Charles Francisco, Fuelane Corp., Liberty, N. Y., Marketers; C. M. Mockler, Shell Oil Co., New York, N. Y., Producers; and Richard Meisenbach, J. B. Beard Co., Shreveport, La., Tank Fabricators section chairman.

#### Alabama LPGA elects Edward Moore its new president

Edward Moore, Calhoun Butane Gas & Supplies, Anniston, was elected president of the Alabama LPGA. The election took place during the group's annual convention in Birmingham, August 2-4.

W. L. Mattox, Automatic Gas of Eufaula Inc., Eufaula, was elected vice president and Mrs. Margaret H. Krueger, Foley Butane Co., Foley, secretary-treasurer.

James Martin, Martin Gas Co., Gadsden, in a speech before the group said "Businessmen can no longer leave the business of politics to other groups. Business leaders must assume leadership in the affairs of government if they are to continue the free enterprise concept of business."

Harry Andrews, United Petroleum Gas Co., told dealers that L. P. gas management alone must accept the responsibility of operating its business on a profitable basis. "Too many dealers," he said, "allow the poorest dealer in an area to establish the profit-making pattern, instead of determining for themselves the return they need on their investment."

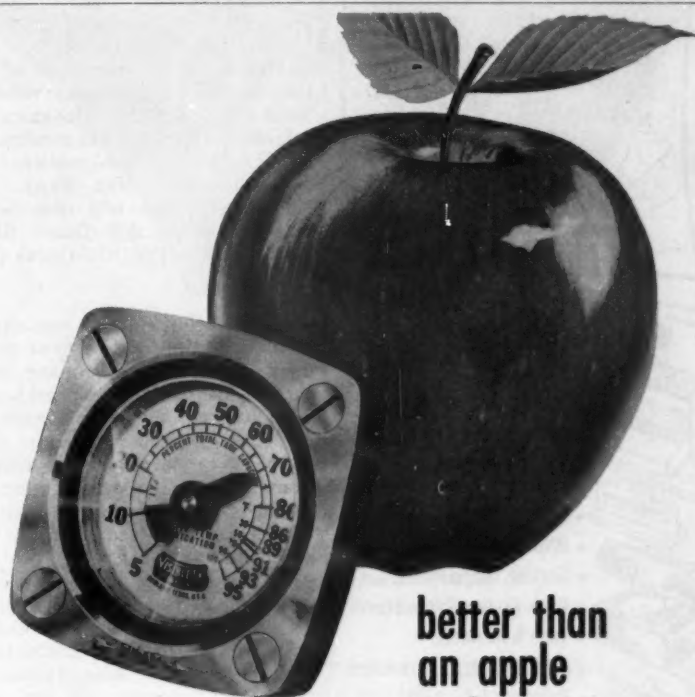
A new group hospital insurance plan for the association was adopted by the board of directors.

Social events included a dance, friendship hours, banquet, punch party and museum tours for the ladies, special luncheon for the ladies, golf tournament for dealers and suppliers and a bridge tournament for the ladies.

## Association Notes

New officers of the Idaho LPGA include: Dick Thatcher, Idaho Falls, president; Bill Williams, Mountain Home, vice president; Chet Kaufman, McCall, director; Rol Gholston, Mountain Home, director, and Bob Freeouf, Twin Falls, director. J. R. E. Carnahan, district sales manager for Van Gas, who attended the Tri-State convention at the Holiday Hotel, Reno, Nev., was reelected a national director.

The appointment of Forrest G. Hammaker Jr. as chief methods engineer at the AGA Laboratories was recently announced. He succeeds Howard Scott, who resigned to join the staff of Consolidated Natural Gas Co. In his new capacity, Hammaker will supervise the conduct of requirements investigational studies authorized by the AGA Approval Requirements Committee and its subcommittees. Since 1957 he has actively supervised the Laboratories research projects on domestic gas cooking and comparison of competitive services.



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. . . because the Visible gauge helps mothers all over the world keep the doctor away from their door . . . helps keep their families secure and healthy, no matter what the weather. When the homemaker checks the Visible gauge, she knows she'll have hot water aplenty for sterilized-clean dishes and clothes . . . heat to prepare hot meals . . . warmth for her family's comfort and health.

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Serving the Gas Industries for Over 40 Years

Richard H. Muellerleile, manager of L. P. gas sales for Cities Service Oil Co., has been named chairman of the National LP-Gas Council's membership-development committee. In his new post, he will supervise a program designed to win greater support for the industry's public relations, advertising, and promotion organization.

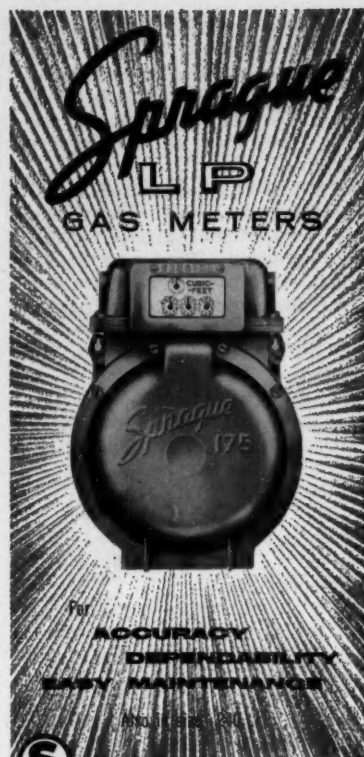
One hundred and five persons attended the fifth annual L. P. gas conference, on August 9-14, in Gainesville, Fla. The conference was sponsored by the Florida LPGA and Engineering & Industrial Experiment Station of the University of Florida.

The board of directors of the Oklahoma LPGA recently voted to employ Bill Wallace as its executive secretary. Wallace will continue to be managing editor-publisher of the Oklahoma LPGA News. The office of OLPGA will now be located in Room 203 Tekoil Bldg., 1515 Classen Blvd., Oklahoma City, Okla.

W A. Keller, Bunkie, was named to fill the unexpired term of president of the Butane-Propane Institute of Louisiana. Ex-president I. W. Patterson, of Baton Rouge, resigned to become campaign manager of gubernatorial candidate Jimmie Davis. In other action the board of directors of the Institute named Lonnie Reed, Eunice, vice president.

Joseph A. Garfield, president of Miami Bottled Gas, was elected president of the Gas Institute of Greater Miami. Also chosen to serve as directors for the year were L. R. Chandler, Gas Oil Products; John T. Bills, Peoples Gas System; C. R. Vetter, Southeastern Natural Gas Corp.; Benjamin Meyers, Miami Bottled Gas Co.; S. W. Langer, City Gas Corp.; and Ted Bergman, the Houston Corp.

The AGA was one of ten associations, representing various industries in the U. S. and Canada, to be named a winner of the National Safety Council's association safety award. The award honors above-average progress in accident prevention, and excellence and balance in safety programs.



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**BPN**

**PEOPLE**

**SUPPLIERS**

**J. HOWARD MARSHALL**—from vice president and director, to executive vice president, Signal Oil & Gas Co. **CHARLES R. GAYLORD**, **W. T. HANCOCK**, **R. W. HEATH**, **O. W. MARCH**, and **G. L. YOUNG**—to senior vice presidents.

**CHARLES CORNEA**—from Nash-Kelvinator and Consumers Power Co., to sales representative in Michigan, Caloric Appliance Corp. **PHILIP SHEEHAN**—to sales representative in the Dade County areas of Florida, Caloric.

**JOHN J. HAYES**—from sales training director, to national accounts sales manager, Cribben & Sexton Co. **ROBERT WALKER**—from manufacturing services manager, Waste King Corp., to manufacturing services manager, Cribben & Sexton, a subsidiary of Waste King.



**J. J. Hayes**  
Cribben & Sexton



**N. E. Davenport**  
Rockwell

**NELSON E. DAVENPORT** — export sales manager, meter and valve products, named assistant to the vice president, Rockwell Manufacturing Co.'s Petroleum & Industrial Meter Division.

**WILLIAM J. LANK**—from chief engineer, Dallas Tank Co., to chief engineer, Maloney-Crawford Tank & Manufacturing Co.

**RAYMOND H. ZIFF**—from midwest sales manager, Sylvania Home Electronics Inc., to district manager for Arkansas, Kansas, Missouri, Oklahoma, Norge Division, Borg-Warner Corp.



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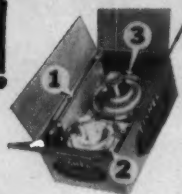
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PACKAGED COMPLETE IN ONE  
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1. 1/2" Pigtail
2. First Stage Regulator
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These new, easily stored packages provide everything needed for each installation. Keeps regulators safe from weather, tampering and theft. Helps inventory control. Two-stage regulation assures trouble-free installation, better pressure and savings on tubing and service costs.

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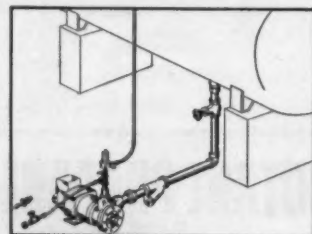
## LP GAS HOSE



Highest quality Hose with factory attached couplings (Reusable couplings available). Perforated synthetic covers. Ground wire tested. Guaranteed to exceed requirements of pamphlet 58.1D sizes from 1/4" to 3".

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**WILLIS DITMANSON**—operations director of national parts department, named national parts and service manager, Motorola Communications & Electronics Inc.

**SIDNEY FRIEDMAN**—from dealer representative, South Jersey Gas Co., to district representative for New Jersey, Magic Chef.

**KENNETH JUNKER**—from various field sales and factory administrative positions, to factory representative in Minnesota, Iowa, North and South Dakota, Payne Co.

**JOSEPH BANDROFCHECK**—from chief account, to assistant controller, Robertshaw-Fulton Controls Co.

**EUGENE SHIELDS**—from vice president and general manager, Sid Harvey of Pa., to president, Sid Harvey of western N. Y., Inc. **JACK DEYO**—from vice president and general manager, to president, Sid Harvey Sales, Inc., Garden City, N. Y.

**E. T. KEEHAN**—has increased his managership of eastern territory to include Alabama, Arkansas, Georgia, Louisiana, Mississippi, Florida, and North and South Carolina, Speedway Products Department, Linde Co. E. A.

**STEFFENS**—replaces W. G. MYERS, retired, to cover Pennsylvania, Maryland, Virginia and West Virginia. **P. C. WARREN** and **M. HOLLOWAY**—added to the sales staff, Warren as sales representative for the northeast states, and Holloway for Alabama, Arkansas, Mississippi, Louisiana and Tennessee.

**GEORGE T. EMLEY**—from sales representative in Iowa, Nebraska, Minnesota and Missouri, to manager of L. P. gas sales, Texas Natural Gasoline Corp.

**WILLIAM A. EFT**—a regional manager with the Maytag Co. for more than 30 years, has retired.

**HUGH J. CLARK**—from district manager for valve sales in Ohio, Michigan, West Virginia, and parts of five other states, to manager of the valve department, Ohio Brass Co. He succeeds T. R. ROBERTS, who died August 2.

**JAMES S. TAYLOR**—from an editorial capacity, Rinehart Oil News, to sales engineer, oil and gas equipment sales operations, Graver Tank & Manufacturing Co., division of Union Tank Car Co. **WAYNE LUTKE**—to district manager, operating out of Midland, Tex.

**EARL B. CUTTER, JR.**—from assistant to the vice president-sales, to southern district manager, southwest division, American Meter Co.

## DEALERS

**OWEN LOREN GARRETSON**—from executive vice president and director of Arrow Gas Co., acquired by National Propane in 1968, to assistant to the president, National Propane Corp.



O. L. Garretson  
National Propane



O. J. Wissing  
Kengas

**OWEN J. WISSING**—from general manager, Silgas Corp., to general manager, Kengas Inc.

**ROSS K. ALBON**—from operations manager, Protane Corp., to vice president-marketing, National Propane Corp.

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Heat and vibration-proof, non-solvent, will not shrink, crack or crumble. Makes all assemblies leak-proof and pressure-tight. Prevents rust, corrosion, joint seizure.

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Multiply the 45 ready-mix trucks in this photo by two and you'll have the number of trucks Southern Materials has thus far converted. Multiply this photo by four, and you'll have an approximate picture of the company's 1960 LPG-powered ready-mix fleet!

**Half-converted ready-mix fleet now saving**

**\$58,000 per year — thanks to LPG**

**STAFF** ***BPN*** **REPORT**

Eastern Editor William T. Harper here presents a convincing and well-documented case for propane carburetion. His story on Southern Materials Co. Inc., begins on the following page.





This GMC "550" V-8 is typical of the fleet's newer additions, each of which cost an average of \$17,000. Note the 43-gal. LPG tank directly behind the running board. Each truck has two such tanks. Here is one of the two 12,000 gal. tanks at Southern Materials' model storage plant in Norfolk. Note the large, attractive sign giving instructions for loading LPG.

## *And next year's savings will be more than doubled!*

**D**O you know of any companies that would like to cut truck maintenance costs by over \$58,000 a year? Southern Materials Co. Inc., of Norfolk, Va., is doing just that. As a matter of fact, it is annually saving \$40,558.05 on just fuel, oil, and maintenance parts. And within the next three years, the latter figure will skyrocket to more than \$90,000 per year!

How is Southern Materials accomplishing such savings? Simply by converting its concrete-mixing truck fleet from gasoline to propane, according to Walter F. Bailey, the fleet superintendent. And, the figures he provides back him up.

Southern Materials was founded in 1938 when it erected sand and gravel production facilities on the

James River and ready-mixed concrete plants in Norfolk and Richmond, Va. Total production of sand and gravel in its first full year amounted to 190,000 tons. Twenty years later, that figure had climbed to 3 million tons per year. Today, the company has 20 plants, some as far away as Jacksonville, Fla.

Southern Materials still digs sand and gravel material from river banks, loading it directly into floating production plants. It also digs it out of the ground, trucking it to a stationary production plant near the river's edge. In the production plant, the material is washed, crushed, and screened to many sizes of sand and gravel. The processed materials are placed in stockpiles or loaded directly onto waiting transportation.

The transported materials go to the company's sales plants by truck, river scow, or railroad. At the sales plants, the sand and the gravel are unloaded into stockpiles or bins, to be sold directly or mixed with cement and water in one of 200 ready-mix trucks. These are the trucks that the company converted with such financially delightful results.

The conversion story begins in 1957. Bailey recalls that prior to that he had been approached many times by carburetion people who told him of the potential savings in converting to propane. He was also shown several favorable reports, including reprints of articles that had appeared in *BUTANE-PROPANE News*. Finally, Tuloma Gas Products Co., of Tulsa, Okla., sent



The Best Known Is Best To Sell—Zenith is the oldest and most experienced manufacturer of industrial engine carburetors. This experience has been applied to LP-Gas Systems to deliver all the advantages of this fuel.



Clark, a foremost manufacturer of materials handling equipment, now offers a complete line, with capacities from 2,000 to 5,000 lbs. using Zenith LP-Gas Systems. Zenith Conversion Units are for all makes and types.

## OUTLINE OF UNUSUAL OPPORTUNITY:

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1. Materials handling equipment powered by LP-Gas has increased tremendously.
  - a) Demand last year reached all-time peak—and is still growing.
2. Much of this demand is being met by converting present units to LP-Gas.
  - a) Conversion installations are quick, easy and profitable to make.
3. Profit is attractive 2 ways:
  - a) Zenith conversion units give trouble-free performance—keep operators satisfied.
  - b) Every unit provides additional fuel customers!
4. Zenith, leading manufacturer of industrial carburetion for many years, applies this experience to its LP-Gas conversion units.
  - a) Zenith conversion units are for all makes of lift trucks, tractors, and industrial engines.

Get the complete story. Write us now for information on conversion units for materials handling equipment. LP-Gas Sales Department, Zenith Carburetor Division, 696 Hart Avenue, Detroit 14, Michigan.

Zenith Carburetor Division



# How Southern Materials Saves \$58,000 Annually

ITEM	ANNUAL QUANTITY		ANNUAL COSTS		ANNUAL SAVINGS	
	With LPG	With Gasoline	With LPG	With Gasoline	Per Truck	For 90 Trucks
Fuel (in gal.) .....	540,000	540,000	\$48,600.00	\$81,000.00	\$360.00	\$32,400.00
Oil (in gal. @ \$0.76) .....	540	5,400	410.40	4,104.00	41.04	3,693.60
Truck Oil Filters (@ \$1.87) ....	135	1,350	252.45	2,524.50	25.24	2,272.05
Mixer Oil Filters (@ \$0.88) ....	135	1,350	118.80	1,188.00	11.88	1,069.20
Spark Plugs (@ \$0.52 ea) ....	1,080	3,240	561.60	1,684.80	12.48	1,123.30
			<u>\$49,943.25</u>	<u>\$90,501.30</u>	<u>\$450.64</u>	<u>\$40,558.05</u>
Maintenance crew reduced by four men .....						\$18,000.00
						<u>\$58,558.05</u>

Russell Williams, a carburetion engineer, to convert one Southern Materials truck.

This truck was really "put through the mill." With 200 trucks to worry about, Bailey felt he must be sure. The test truck was on trial for about one year. A tachograph (registering tachometer) was installed. Oil and fuel consumption were checked. The ignition system was tested. An exhaust analyzer was used. When the results were compiled, Bailey was convinced. The okay was given to convert the entire fleet!

The first big conversion job was on 16 trucks in the spring of 1958. Williams stayed right on the job supervising and teaching. Like all those to follow, these were dual conversions, involving both the engine that propels the truck and the engine that rotates the cement-mixing cylinder.

Williams found that the only changes necessary were the carburetors and intake manifolds of both engines. No changes were made in the compression ratio.

These trucks were Fords, GMC's, Whites, and Macks with capacities ranging from 40,000 to 70,000 lb and horsepower ratings ranging from 140 to 212. The Worthington mixers are powered by 6-cylinder 60 hp Chrysler Industrial engines.

No power was lost in any of the conversions.

"As a matter of fact," Bailey states, "some trucks even increased in power."

Following the "guinea pig" conversion, Southern switched a total of 90 trucks to propane. As each job was completed, a mechanic went out with the driver of the truck and checked its performance under operating conditions. If any adjustments were needed, the truck was immediately brought back to the shop for finer tuning. Bailey estimates that it takes about one hour of such checking to get a truck to operate at 100 per cent efficiency.

Present plans call for Southern to complete 85 more conversions by the spring of 1960. The remaining 25 trucks in the fleet are diesels, which will be replaced by propane-powered trucks when they wear out in about three years.

Southern Materials has kept very detailed records of the performances of its converted fleet. These records show that:

1. Fuel consumption remains the same.
2. Fuel cost drops 40 per cent.
3. Oil consumption drops 90 per cent.
4. Oil filters last ten times longer.

5. Sparkplug and points last three times longer.

6. Engine life increases at least 20 to 30 per cent.

All of these factors add up to the saving of \$40,558.05 per year for the 90 trucks. When the entire fleet is converted, this figure will jump almost another \$50,000 to a grand total of \$90,128! How do the half-dozen factors noted above amount to the savings mentioned? Let's look at Bailey's figures.

Lubricating oil costs the company 76 cents per gal. Prior to conversion, each two-engined truck used 60 gal. per year. Now it uses only 6 gal. per year (and after 10,000 miles, the oil is still within specifications, having no dilution). This is a saving of \$41.04 per truck per year. The oil filters cost \$1.87 for the truck and 88 cents for the mixer. Both had been replaced 15 times per year. Now they are changed one-and-one-half times per year. Here the saving is \$37.12 per truck per year. The two engines in most trucks use six sparkplugs each (some trucks are V-8's), at a cost of 52 cents per plug. The company now uses 12 plugs per year per 6-cylinder truck as compared with 36 in pre-conversion days. This amounts to a saving of \$12.48 per truck per year. And now it costs Southern \$360 less per



truck per year for fuel.

These figures total \$450.64 per truck per year. Multiply that by the 90 trucks so far converted and it comes to an annual saving of \$40,558.05. But that is not all.

"We were able to cut our maintenance crew by four men since the changeover," says Bailey. "We simply didn't have enough work for them."

One of the reasons for this was that propane eliminated the carbon build-up in the mixer engines. This build-up occurs at idling, the speed at which these engines usually operate. Another reason was the reduction of man-hours needed for oil changes. Each truck formerly needed five oil changes per year, but now needs only one. Each change requires 15 minutes. Now, only 22½ man-hours are needed for oil changes for the entire fleet, as against 112½ man-hours previously. This cut in personnel means the conversion allowed Southern to chop about \$18,000 off its annual payroll, bringing total savings to \$58,558.05.

Another, harder-to-pin-down sav-

ing came when Southern found that the conversion enabled it to save some of the trucks from the scrap heap. This meant being able to hold off on spending \$17,000 apiece for new ones.

Bailey says it costs the company about \$475 for each twin-conversion. With the annual saving realized, it takes slightly over one year to amortize this cost. He also adds that the cost of the storage plant was amortized in about one-and-one-half years.

During the first conversion job of 16 trucks, Tuloma men taught Southern's mechanics how to do the job and they have done every one since. They also do their own maintenance.

Tuloma District Sales Engineer R. P. Erickson, headquartered in Williamsburg, Va., supervised the installation of the storage facilities. Plumbing and electrical work, however, was contracted out, due to local codes. Erickson and Tuloma can really take a bow, for this installation is now used as a model by the local fire department to show others how a storage plant

should be designed!

Southern's propane storage needs in the Norfolk area are handled by two 12,000-gal. tanks and in Jacksonville by an 18,000-gal. tank. It plans to put in three more tanks within the next year. Each truck carries two permanently-mounted 43-water-gal. tanks and uses about 40 gal. of propane per week for the truck and 20 gal. for the mixer.

After the first conversion, all Southern drivers attended LPG handling classes conducted by personnel from Tuloma, which supplies Southern's fuel.

"At first," Bailey recalls, "the men were apprehensive about handling this fuel. But, this had its advantage. It made them much more careful than they were with gasoline. This increased our safety factor around the plants."

As if all the savings noted so far were not enough, Bailey comes up with still another.

"Since converting to propane," he adds, as he leans forward and lowers his voice somewhat, "we've noticed a decided drop in 'shrinkage' in our fuel supply." ■

This is one of the two 12,000 gal. tanks that make up Southern Materials' model storage plant in Norfolk. This is the facility

that is used by local fire authorities to show "how it should be done." Note large sign that practically shouts safety instructions.



for long wear  
low vibration  
fast pick-up

## JOHNSON VANASIL PISTONS



**JOHN DEERE**  
Vanasil or  
Aluminum  
Pistons—jump  
power output  
as much as  
25%

**MINNEAPOLIS-  
MOLINE**  
"U" Vanasil  
Pistons—light-  
weight, yet tough  
as cast iron



LP conversions of John Deere and MM-"U" tractors result in more power and performance with Johnson Vanasil Pistons. Newly patented Vanasil amazingly combines the hardness of cast iron with the lightness of aluminum. Precision Johnson machining and engine "know-how" keeps pistons snug without sticking. Tractor vibration is kept low... stalling eliminated... pick-up increased.

For John Deere A, G, "50", "60" and "70"... also Minneapolis-Moline "U". Johnson Aluminum Pistons are available for John Deere A, B, D, G and H models



**JOHNSON COLD MANIFOLDS FOR LP GAS** keep constant flow at correct temperatures... are available for:

John Deere A, B, D, G  
International H, M, W-9  
Allis-Chalmers W, WC, WD, WF  
Ford 600, 700, 800, 900 Series  
—also International and Chevrolet trucks.

WRITE for literature and prices.

## JOHNSON MACHINE SHOP

DEPT. B-30

PONTIAC, ILL.

## A controversial way to build a carburetion load

EDWARD G. DICKSON

**S**ELECTIVE selling and limited service — those are the two controversial principles upon which Dick Nivens has built his carburetion load. Many dealers will not agree with these principles, but they will appreciate the fact that carburetion has boosted overall sales 15 per cent for Nivens' Superior Bottled Gas Corp. at Fort Lauderdale, Fla.

This load was built with only moderate sales effort but with a lot of cooperation with prospective customers, according to Nivens. And, because of the firm's selective policy, it has been achieved with only a handful of regular carburetion customers, plus a few seasonal or sporadic users.

"We like this business and we expect to handle more of it in the future," says Nivens, "but only on our terms. We have no plans for getting into servicing. A number of dealers have become so involved in free or nominal charge service work that their gas sales become almost profitless. So, we are restricting our carburetion sales efforts to firms which have their own fleet maintenance. Also, we want customers who are big enough users to warrant installation of large supply tanks on their premises. Thus, we can replenish their supplies at our convenience."

Superior's role in building this load has been chiefly counseling and liaison work, putting customers in contact with conversion equipment companies, but installing tanks and pumps. Its big carburetion customers are: two ready-mix concrete companies, two concrete block manufacturers' firms, and one stevedoring firm.

"One good carburetion account like some of these can use as much gas in a year as 500 of our domestic accounts," Nivens says.

Superior's entry into the carburetion field began four years ago. One of the largest local companies in the transit-mixed concrete field indicated it was interested in trying propane in its ready-mix trucks. Superior recommended a conversion unit which it had found

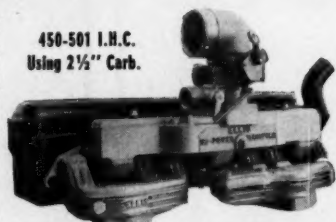
very successful on its own trucks. The company converted one truck and ran it for a trial period of more than six months. The findings favored LPG. When time came for new equipment, the firm ordered six new trucks factory-equipped for LPG. Today, its entire fleet of 20 ready-mix carriers is propane-powered, some converted in the firm's own shop.

Another concrete firm, in Delray Beach, about 30 miles away, heard about Superior's carburetion counseling and asked for assistance. The trial conversion process was repeated. It brought another fleet customer — with six transit-mix trucks, two fork lifts and two flat-bed trucks.

Later, three other firms were added to the carburetion customer list. A new concrete block firm in Pompano Beach was referred to Superior and its four fork lifts went on the list. Then, a block and

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Using 2½" Carb.



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Get the most out of your LP truck with an Ellis Dual Exhaust Manifold. This latest addition to the Ellis line has proven far superior to the so-called improved 3½ x 4" exhaust systems in test after test under actual road conditions.

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**ELLIS MANIFOLD CO.**

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Los Angeles 23, California

Angelas  
24162  
Phone

building supplies company almost next door to Superior converted four lift trucks. And, at Port Everglades, Fort Lauderdale's busy seaport, a stevedoring firm converted 12 lift trucks.

A number of factors will determine Superior's future carburetion course. The arrival of natural gas may mean that Superior must look more to new markets, and carburetion may be one.

With this in mind, Superior's recently-completed new office-showroom-warehouse in Fort Lauderdale has a propane fueling station in a prominent position in front of the three-acre plant site. (It also serves as a bottle-filling station.) So far, the vehicle-filling facilities are used only occasionally—mostly by itinerant trucks and autos; but Nivens believes this business will grow.

A similar station is to be put in at the firm's new Pompano Beach plant, located near a state farmer's market. Truckers of all types come to the market, and many use propane for refrigeration as well as for motor fuel.

"Every day we see more itinerant vehicles using propane. These fueling stations will help establish us as dealers where propane can be obtained," Nivens says.

"With a sales campaign, the company undoubtedly could persuade more firms to convert to propane," he continues. "But under present conditions, we do not want to sell the man who has two trucks and does not have his own service department. It would almost certainly involve us in service work, which—for the present, at least—we are not set up and want to avoid."

Superior does have a mechanic who has been with the firm for nine years. If a customer has a continuing problem that points to carburetion, the mechanic is dispatched to help in any way that he can. This, Nivens feels, Superior should do; but it should not become further involved in service.

"The way I look at it, an LPG carburetor is a very simple piece of equipment. There isn't much that can go wrong with it. My impression of carburetion service work is that in most cases the trouble has nothing to do with the carburetor or the gas. We don't want to become involved in the automotive repair business."

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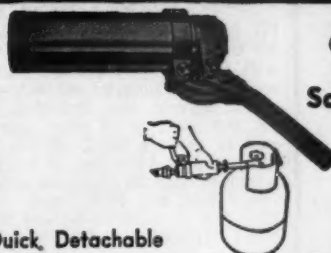


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Quick, Detachable  
Overall Length  
Domestic 7" Truck 11"

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UNDISPLAYED CLASSIFIED 15¢ a word. Set in 6 pt. type without border. \$3.00 minimum charge per insertion. If Blind Box number cars of B-P News is used, count as five words.

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## HELP WANTED

DEALERSHIPS OPEN: EXPERIENCED MAN IN LPG, bottles and bulk. Agency agreement. Good opportunity if has railroad siding and spur. RESTRICTED TERRITORIES. WE FURNISH EVERYTHING. Tank Car material, Butane or Propane. Ross Refineries, Inc., Belleville, Ill.

## LP-GAS SALES REPRESENTATIVES

Major oil producing and marketing company expanding sales operations. Need experienced LP-Gas salesmen for sales offices in Gulf Coast, Southeast, Northeast and North Central States. Salary commensurate with experience and ability to produce results.

Reply Box 50, BUTANE-PROPANE News, 198 S. Alvarado St., Los Angeles 57, Calif. giving full qualifications and experience. Enclose recent photograph.

## UNLIMITED

### Employment Opportunities

Servicemen—Installation Men—  
Salesmen—Bulk Plant Managers

Many employment situations available for those with some experience in the LP-GAS Industry. Opportunities for advancement are constantly developing. Over 90 district offices in 18 states east of the Mississippi River. If you have experience in service, installation, selling or bulk plant management send me your detailed employment history, and state the general area in which you would be interested in being assigned.

ROBERT GANTERT  
Personnel Manager

SUBURBAN PROPANE GAS CORPORATION  
WHIPPANY, N. J.

## BUSINESS OPPORTUNITIES WANTED

WANTED TO BUY: A BOTTLE AND BULK LP-Gas Business, with an annual volume of 275,000 to 600,000 gallons, by an experienced operator. Reply Box 53, BUTANE-PROPANE News, 198 S. Alvarado St., Los Angeles 57, Calif.

WANTED TO PURCHASE: RETAIL LP-GAS business in Midwestern or Southeastern states. Reply Box 53, BUTANE-PROPANE News, 198 S. Alvarado St., Los Angeles 57, Calif.

## BUSINESS OPPORTUNITIES OFFERED

FOR SALE: OWING TO OWNER'S AGE and health, an established LP Gas business, both cylinder and tank, in one of the fastest growing industrial sections of the nation. Equipment sufficient to double present load. Satisfactory terms to responsible party. Price right for quick action. Reply Box 52, BUTANE-PROPANE News, 198 S. Alvarado St., Los Angeles 57, Calif.

## BUSINESS OPP. OFF.—Cont.

TWO TRUCK LPG OPERATION AND established major and private independent brand gasoline jobbers for sale. Volume exceeds 1,000,000. Central Oklahoma. 15 owned and leased stations. Excellent earnings. Terrific potential. \$85,000. Poor health. Reply Box 49, BUTANE-PROPANE News, 198 S. Alvarado St., Los Angeles 57, Calif.

LPG BULK PLANTS. WE SPECIALIZE in selling petroleum properties throughout Midwest. Have number desirable plants for sale. OLE BRODD, PETROLEUM MARKETERS, 603 Produce Bank Bldg., Minneapolis, Minnesota.

LP GAS BUSINESS IN MICHIGAN'S UPPER PENINSULA. 1750 Bottle customers, 200 Bulk customers; 30,000 gallon Bottling Plant; Five trucks radio controlled; \$127,000 plus inventory. M. E. McCormack, Broker, Iron River, Michigan.

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7500 to 8200 GALLON TRAILERS—T-1 and 202 Steel—\$7795.00 reconditioned—New Recaps—will deliver 700 miles—Phone JE 6-1730. PAT & CHUCK SUPPLY CO., "The Tread- ingest Monkeys in Texas," Ft. Worth, Texas.

USED PROPANE DELIVERY TRUCKS, 1200 GALLONS W.C. Presently in use and being replaced with larger units. United Petroleum Gas Co., 4820 Excelsior Blvd., Minneapolis 16, Minnesota.

5000 GALLON TWIN PROPANE TRAILER good condition, recent certified calibration, now in service—\$2950.00. MOTOR FUEL TANKS —NEW. 24 x 48—82 gallon—\$79.30; 20 x 36 —43 gallon—\$64.10. Side fitted, float gauge. Kirkwood Propane Gas, Box 3536, Phone Taylor 1-4040, Kirkwood 22, Missouri.

## TRADE WITH A TRADER! NEW & USED PROPANE TRUCKS

I'll trade with you on the phone! My ONE MAN SALES FORCE (myself) SAVES you the usual 10% sales commission, eliminates any mix-up on order, delivery date, financing, etc., yet this year, as in every year for past 10 years, I SELL MORE tank trucks than anyone else. If you have a trade-in, send me photo and description. Used and NEW units (1400-2200 WG) in stock for delivery NOW. EASY TERMS—(10% Down—36 Mos. on balance—I carry my own paper). DONT BUY OR LEASE a unit until you CALL ME—Day or night. WHO AM I?

Preston Grace—Ph. RI 3-2374

WHITE RIVER DISTRIBUTORS  
Batesville, Arkansas

## FOR SALE—TRUCKS - TRAILERS - Cont.

HAUL MORE PROPANE AND LESS STEEL! LOAD AND UNLOAD FASTER! Save the annual Federal tax on trucks that weigh more than 13,000 lbs! Users praise the Nor-Tex 2500 WG Single Barrel Payload Special of 202B X-rayed material and stress relieved. Weighs only 12,890 lbs. completely equipped with High Flow Plumbing, Meter, Hose, Hose Reel, Fire Extinguisher and mounted on cab-forward truck with 108" cab to axle dimension. Increased capacity pump boosts deliveries to 50 GPM. Vapor manifold permits easy simultaneous loading and unloading of twin tanks with either compressor or liquid pump. These popular, carefully engineered and sleek designed Nor-Tex Single and Twin units are produced in four attractive models: The "Standard"—the "Custom"—the payload "Special" and the "DeLuxe." That's not all! Twin units, up to 2000 WG. are mounted on 85" cab to axle. Start hauling more gas and less steel. Do it profitably and in much less time. Phone, wire or write for prices now. NORTH TEXAS TANK CO., Denton, Texas. Phone DU902 2-5416.

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In stock, ready for immediate delivery. Buy early and avoid steel price increases.

Write, wire or phone RAY REEDY  
TRINITY STEEL CO.  
Dallas, Texas  
Phone: FL-7-3901

TRANSPORTS: SINGLE OR TWIN barrel; new or used; for lease, or sale on budget or rental sale plan. If you want maximum payload, with all of the latest equipment engineered to fit your truck, roads, and your hauling problem, get the LMC PAYLOADER  
Contact Lubbock Machine & Supply Co., Inc., Drawer 1589, Lubbock, Texas

## WE SAVE YOU MONEY LOOK at this typical SPECIAL

BRAND NEW 1959 Chev. 2 ton with 1800 gal. twin propane tanks, PIPED COMPLETE with Viking pump, Neptune Printer Meter, 20# fire ext., 75' each filler & vapor hoses, ICC lights, full size rear cabinet & controls, READY TO USE—ONLY—

\$653.00 Down and 36 payments of \$189.15 including interest.

You SAVE over \$1,000.00 by buying instead of leasing. Other sizes (1400-2200 WG) & other makes new trucks (at FLEET PRICES) available. WE TRADE. We have USED TRUCKS & TANKS also. Call me anytime.

Preston Grace

WHITE RIVER DISTRIBUTORS  
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# CLASSIFIED Advertising



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FOR SALE: TWO PROPANE TRAILERS, 5600 gallon each, price \$2,500.00 each. Blockton Oil Co., Blockton, Iowa.

### NEED A NEW OR USED PROPANE BULK TRUCK?

Why don't you call a man who KNOWS trucks, likes to TRADE, makes quick delivery, has EASY TERMS, appreciates your business, and SAVES YOU MONEY. All sizes in stock. Hundreds of SATISFIED CUSTOMERS the World Over.

Proton Bros  
WHITE RIVER DISTRIBUTORS  
Ph. RI 3-2374—Batesville, Ark.

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3000 gallon size built especially rugged for oil field use. Write, wire or phone  
Lubbock Machine & Supply Co., Inc.  
P. O. Drawer 1589  
Lubbock, Texas

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Immediate Delivery  
550# WP Propane Storage Tanks, 8,250 WG through 12,450 WG; 72" diameter; 10,170 WG through 16,800 WG; 84" diameter; 15,200 WG through 20,500 WG; 96" diameter. Ready for immediate delivery, our truck fleet. ORDER EARLY and AVOID STEEL INCREASE.

Write, wire or phone RAY REEDY  
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DALLAS, TEXAS  
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"Listed by Underwriters' Laboratories, Inc." If you use as many as one load of tanks per year, it will pay you to contact us. Distribution throughout the Mid-West and Southern states.

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Low Freight Charges Anywhere

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• DEALERS • SALESMEN • SERVICEMEN

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Butane-Propane News

198 S. Alvarado Street, Los Angeles

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BUTANE-PROPANE News  
198 So. Alvarado St., Los Angeles 57, Calif.

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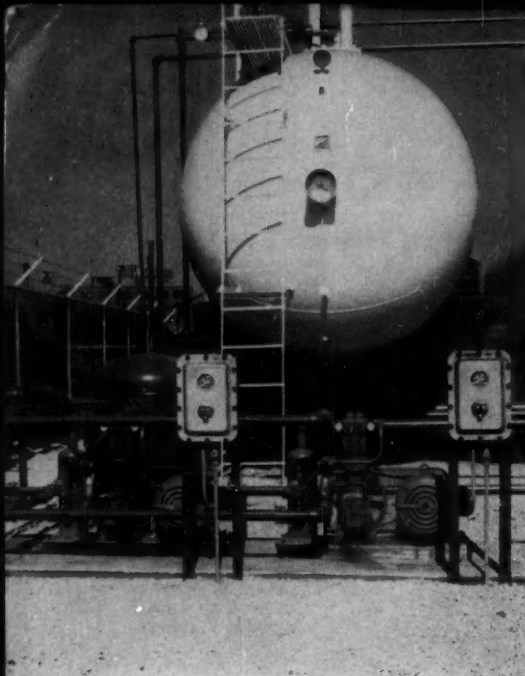
1. **One-piece flued manway** with hinged cover makes access easier, makes cleaning, maintenance and inspection more economical.
2. **Tank calibration** assures accurate capacity. Tanks are water-gauged and certified to within three pints, using methods established by U. S. Bureau of Standards and approved by ICC and AAR.
3. **Recessed gauges** and valves assure safety... can't be broken off in any accident or mishap.
4. **Lightweight "Sigma" baffles** are scientifically designed to prevent surging, give easy access to interior, do not add excessive weight, are easily removable.
5. **One-third less welding** in three-piece sectional heads minimizes areas of stress concentration.
6. **Engineered to prevent obsolescence:** four-inch flanged liquid

outlet connection is designed to permit unloading at rates in excess of 250 gallons per minute.

7. **Other features** include spray filling... steel-grit-blasted surfaces internally as well as externally... complete fabrication and stress relieving facilities in one plant, under one roof.

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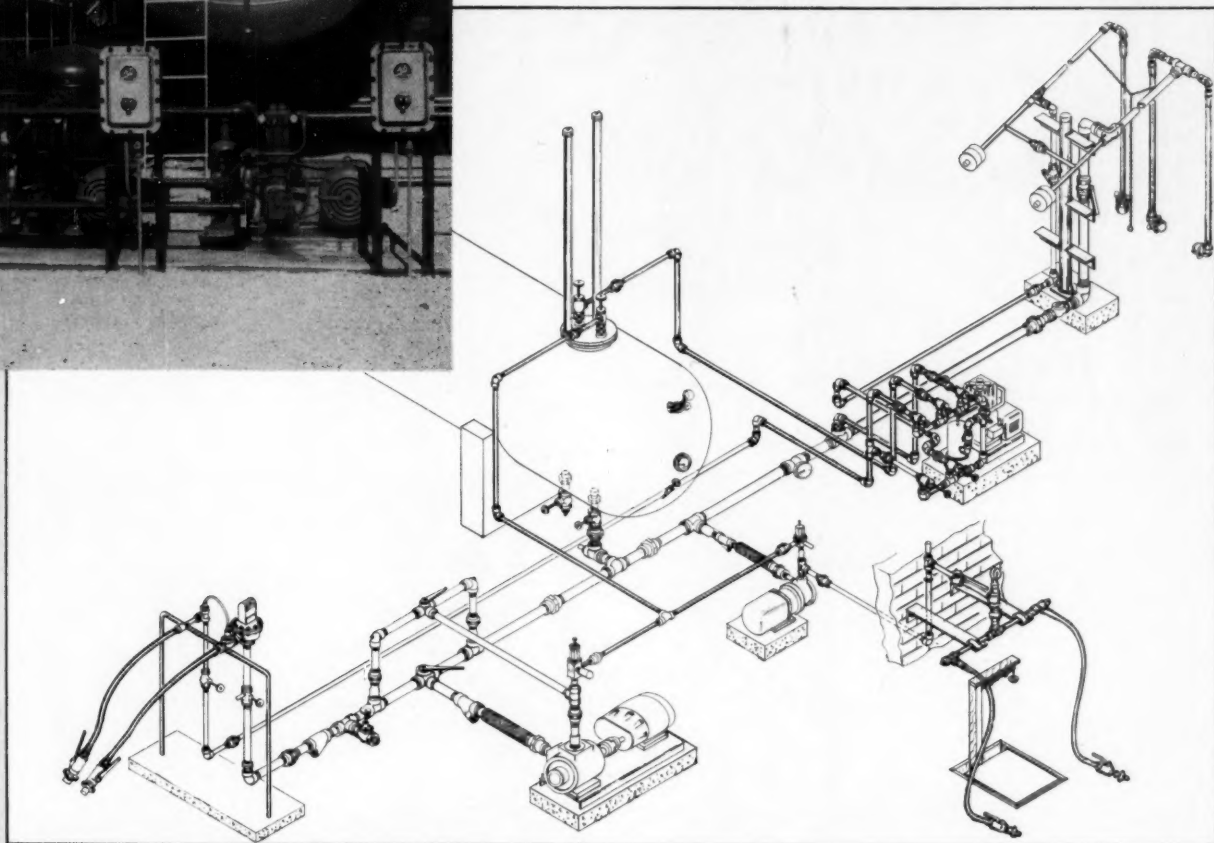
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